Address.

IN MEMORY OF SILAS WEIR MITCHELL, M.D., LL.D.*

BORN FEB. 14, 1829; DIED JANUARY 4, 1914.

BY JAMES J. PUTNAM, M.D.,

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IT is not my purpose to attempt tonight an adequate characterization of the personal qualities or of the scientific and literary standing of the late Dr. S. Weir Mitchell. All that I propose to do is to offer, in the name of this society, some slight tribute of affection and respect.

No one can doubt that Dr. Mitchell will be remembered as among the foremost of American physicians, and as taking a high place among American literary men. The testimony of his innumerable and deeply grateful patients and of the vast circle of his professional friends, the long list of his medical and scientific publications, the still longer list of his literary works, and the many honorable tokens of appreciation bestowed on him by American and foreign societies and institutions, place this statement beyond question. He felt also the obligations entailed by his powers and opportunities, and kept his torches burning until the very last, so much so that the issue of *Science* published on December 12, 1913, only three weeks before his death, contained a memoir by him of his friend, the late Dr. John Shaw Billings. So predominantly characteristic was this endurance, until the last, of his vivacity, his eagerness and his activity, that one saw at once, in him, a man of the type made deathless by Tennyson's "Ulysses," longing, even in his closing years, to re-live the days that had been so full of joys and combats among his peers, and seeking to the very last new friendships and new worlds.

" . . . I will drink
Life to the lees; all times I have enjoyed
Greatly, have suffered greatly, both with those
That loved me and alone; . . .

. . . . .

"For always roaming with a hungry heart
Much have I seen and known; cities of men
And manners, climates, councils, governments,
Myself not least, but honour'd of them all.

. . . . .

"I am a part of all that I have seen;

. . . . .

"Tho' much is taken, much abides; and tho'
We are not now that strength which in old days
Moved earth and heaven; that which we are, we are,
One equal temper of heroic hearts
Made weak by time and fate, but strong in will
To strive, to seek, to find, and not to yield."

* Read before the Boston Society of Medical Improvement, March 23, 1914.

But if Dr. Mitchell was distinguished for his talents, his industry, and his achievements, it is equally true of him that he was a warm-hearted lover of mankind both in a narrower and a broader sense. To all who cared for them he was generous of his time, his interest, and his affection, recalling, in this respect, his close friend, Sir William Osler. Such failings as he had were of a very human sort, tending to intensify the sense of relationship to others, and inducing him to make himself felt by them as a warm and living person. These genuinely human interests may have furnished one deep root for his strongly religious tendencies, and for the courtliness of manner which contributed to his charm. They also explain Sir William Osler's saying: "Of no man I have known are Walter Savage Landor's words more true, 'I have warmed both hands at the fire of life.'"

Endowed with an affectionate and highly social temperament, a brilliant mind and quick wit, he went on through life continually forming new friendships of the best sorts, as with such men as Phillips Brooks, and drinking forever at the self-renewing fountains of youth. Some men seem built to run smoothly in some one groove alone, and are driven by their destinies to become, this one a poet, that a man of science, and so on. But Dr. Mitchell's main desire, I think, was not so much to become eminent in any special lines as to leave no well-marked line of human interest untouched. The great variety of the subjects dealt with in his stories and his poems, the great variety—all things considered—of his scientific attainments, the great variety of temperaments to be found among those who could call themselves his friends, illustrate this point.

To Dr. Mitchell's friendliness I can bear personal witness. For though he was at the top of the ladder when I was at the foot, he went out of his way, at that period, on several occasions, to receive me as an equal and friend. Well do I remember dining at his hospitable table while still in the greenness of relative youth, and eating there the fatted terrapin, fatted, as I remember, in his own cellar, and served up with as good a sauce as any self-respecting terrapin could desire. My first acquaintance with him was, however, of still earlier date, for it is well-nigh forty years ago that he came as a consultant to visit a life-long invalid who had the distinguished honor of being almost my first patient. I can recall with perfect distinctness his pleasant manner on that occasion, and the dew of soothing encouragement which his visit left behind for both of us.

It is with great pleasure also that I recall a visit made in company with Dr. Mitchell to the Orthopedic Infirmary, which, if I am right, he transformed from a no doubt useful, but somewhat unknown, institution of one kind into a real scientific centre of quite a different kind, its old name, however, being retained. It was

here that many of his scientific researches on a clinical basis and many of his therapeutic studies were instituted, with admirable results.

These reminiscences of my youth may be capped by a story which he told me of his own, and which I re-tell with the greater pleasure that it seems to me to describe certain of his strongest traits. He had just become, he said, the assistant of his father, the eminent Dr. John K. Mitchell of Philadelphia, and was left by the latter, who had gone on a vacation, to hold the fort during his absence, with instructions to keep the practice going, and the patients alive, if possible, until his father should return. Dr. Weir Mitchell was then the rawest of young doctors, but already conscious of that undying well-spring of courage and resourcefulness which remained with him through life. Who should the first patient be with whom he had to deal, during this important interregnum, but a gentleman with an inveterate psoriasis, who had traveled the world over in the elusive search for health, and had come at last, as Naaman came to Elisha, to seek the senior Dr. Mitchell! What should be done? The improbability of a cure simply by repetition of old methods stared Dr. Mitchell in the face, and the fashion of that particular period was not favorable to the recommendation of dipping just seven times in Jordan. But his courage and his inventive genius stood him in good stead. He put the patient to bed, under the care of a trained nurse, and bled him copiously, at first daily, then less often, hoping almost against hope that the disease would admit itself starved out before the patient should succumb. Not without grave anxiety he watched the distinguished invalid growing weaker day by day. But at last, when even his hopefulness threatened to give way, the spots began to fade, and finally disappeared. Then came the fattening-up, and after this had reached the proper point he sent his patient off, well satisfied with the treatment he had had.

It is easy to see indications that these qualities of resourcefulness and daring played a part in Dr. Mitchell's career on many an occasion, and to imagine their influence where it was not visible. One might have thought that they would have tempted him to surgery. It is, however, an interesting fact that although at the request of Surgeon-General Hammond, and with the valuable aid of Drs. Morehouse and Keen, he organized an excellent hospital during the Civil War, where he gathered the large material to be used later for the classic work (by Mitchell, Morehouse and Keen) on "Gunshot Wounds and Other Injuries of the Nerves," and although he actually tried surgery, yet he found it to be distasteful, and soon abandoned it. My warrant for this statement is an interesting letter very kindly written to me by Dr. John K. Mitchell, in which he says that Dr. Weir Mitchell's father at first tried to dissuade his son from studying medicine at all, "as not being of the disposition or having the studious and persevering kind of character that would make him successful in it." Finding him determined to persist, however, he urged him to take up surgery by preference, as being better paid than medicine, and more in the way of development at that period, which was about 1850.

> "In consequence, in spite of a great distaste for surgical operations and even for bloodshed, my father worked at it, and worked in Paris as well as here, and even for a while performed operations. He saw the end of operations without anesthetics and the beginning of operations with anesthetics, but he soon proved to himself and convinced his father that he was not likely to make a surgeon."[1]

The hospital, it should be said, was planned for soldiers suffering from nervous diseases. But its scope

> "was soon enlarged to include men suffering from injuries of the nerves. Before long it was found necessary to build a new hospital with accommodations for 400 patients. Here a vast number of cases representing almost every conceivable type of obscure nervous disease was received. Few persons have at any time had such a field for the study of these maladies, and Dr. Mitchell and his colleagues made full use of their opportunities."[2]

The book on injuries of the nerves, written in 1864, has always seemed to me a contribution of high merit. It was no mere restatement of the views of others, but embodied personal observations giving evidence of keenness and originality. This experience in the army secured to Dr. Mitchell the opportunity to obtain consultations in neurological cases and led him to devote himself for the most part to the study of that subject, which held his interest until his death.

The subject of Dr. Mitchell's medical and scientific labors is soon to be reviewed by one well qualified to do the subject justice, and cannot be discussed here in detail. To those whose memory stretches back so far, the very titles of some of his original communications, as "Reflex Pain," and "Erythromelalgia," arouse stimulating recollections.

It was this same self-confidence to which I already have referred that led Dr. Mitchell, about fifteeen years ago, to deliver his bold broadside against the system then prevalent in hospitals for the insane, under which the superintendents had become to a great extent mere administrators, neither doing nor expected to do much of anything in the way of scientific work. The criticisms thrown out in this address

[1] Letter from Dr. J. K. Mitchell.
[2] *Brit. Med. Jour.*, January 10, 1914.

may have been felt as unjust by this person or by that. But the stand taken went a long way toward modifying for the better a custom which had become very much of a reproach, and made it easier for the superintendents, whose task had truly been a hard one, to demand laboratories and to set the machinery of research in operation.

I will add another trifling, but amusing character-story, given me by Dr. F. C. Shattuck, in which similar traits appear. Dr. Mitchell was, it seems, just leaving Milan after a temporary visit, when a gentleman came up to him in the hotel, asking if this was Dr. Weir Mitchell of Philadelphia and saying that he greatly wished to consult him, as he was a serious sufferer from insomnia. Dr. Mitchell declared that the carriage was at the door, and that his departure could not be delayed. But while talking with the would-be patient he noticed a brown stain at one corner of his mouth, and observed the ends of a number of big cigars sticking out of his vest pocket. Taking advantage of these hints he ventured the opinion that his insomnia was due to too much tobacco, adding the guess that he both smoked and chewed heavily. The astonished patient admitted the soft impeachment, and wrote to him a month later that his opinion and the treatment based upon it had been poductive of excellent results.

In some respects the mental attributes of the scientific student were as prominent in Dr. Mitchell as his genius for therapeutics; nor was he less competent in literary research. His interest in problems of physiology never slept, and the questions that presented themselves in the course of his clinical studies provided an ample field for its operation. One may get a good idea of the range of these studies from reading the Presidential Address before the American Neurological Association, delivered in 1909, where Dr. Mitchell runs over and in a measure sums up his views on some of the topics that had been before him earlier. It was, however, his elaborate studies on rattlesnake poisoning that mainly won for him praise and fame as a student of physiology. His first contribution on this subject was published in 1860, the last in 1886, both being brought out by the Smithsonian Institute. I believe it is true, however, that his interest in the matter was a continuous one, and if I am not mistaken, he made a visit to India in prosecution of his researches. Dr. John K. Mitchell writes to me, "I think the interest in snake poisoning began with some physiological investigations which he and William A. Hammond made together in respect to two South American poisons—corroval and vao,—both of which were said to have serpent venom mixed with them."

Toward the close of this investigation he sent to Dr. Oliver Wendell Holmes, who had long been a close friend, the skin of one of his largest reptiles, and received in return some witty acknowledgments, one of which I quote:

March 1, 1883.

My dear Dr. Mitchell,—

I am reminded of Pope's line:—

"Pleased with a—rattl*er*—tickled, etc."

I don't think I have it quite right, but anyhow I am both pleased and tickled with my rattler's integument. It is magnificent,—not Tofana or Madame de Brinvilliers in all her glory of silks and satins, was clad like one of these. But what a parlous worm it was, to be sure! I didn't know that pizon sarpents ever grew so big as that. He must have shed venom as a milch cow does her amiable secretion. I have got him hung up on my revolver (book-shelves, that is), and he hides a library of volumes. And when he rattled, how he must have waked the slumbering watchmen, if any such were within range! I should greatly enjoy a short biography of this individual specimen of a race which owes so much to your pious labors.

Well, well,—asps and vipers and copperheads, and cobras and rattle snakes of reasonable dimensions I know, but a crotalus with the length and circumference of a boa-constrictor is a new acquaintance, whose *bark*, if I may so call his integument, is much more welcome than his bite would be.

Always, and this time thankfully, yours,

Oliver Wendell Holmes.

In 1906 Dr. Mitchell read, also before the Association of American Physicians,[1] the report of a number of interesting experiments of poisoning by the mescal button, which he said produced optical phenomena suggesting those occurring in migraine.

Psychologically speaking, there is considerable similarity, after all, between the tendencies that lead men to show energy and skill in research of scientific sorts, and those that draw them into investigations in literary fields. These latter fields were wandered over widely by Dr. Mitchell, and my attention has been called, in illustration, to the fact that he did at one time an excellent piece of work in retouching with new illumination the time-worn topic of the great Harvey, and that he succeeded in finding two hitherto unpublished Harvey letters.

As a practising physician Dr. Mitchell found himself constantly in situations where his interest in his fellow-men, harnessed to his courage, his originality and his scientific knowledge, made a strong team. We all remember the stirring breeze, one might almost say Northwester, excited by the publication of his series of little books beginning with "Wear and Tear" and "Rest in the Treatment of Disease," published in 1873 and 1875, respectively, and reaching its climax with "Fat and Blood," in 1877.

[1] Transactions, 1906.

His interest in these matters did not then cease, however, and as late as 1908 he published what may be called the last of the series, on "Rest Treatment and Psychic Medicine."

No one who recalls the earlier booklets of this series and was a living witness of the effect that they produced on the minds of the many toilers with the problem of neurasthenia, can fail to remember how strikingly the lesson was impressed, that when it comes to actually curing patients, the value of a certain amount of very important theoretical information pales into insignificance by the side of a system well worked out in its details. Rest is good, and food is good. But it is by no means always clear how to make these benefits available. Something else is needed. We know now, as we did not know in those days, when suggestion had not been adequately studied, that one or both of two influences must be present if one would really cure a nervous patient. Either he must be made to believe in the doctor, or he must be trained—slowly and painfully, if need be—to believe thoroughly in himself. Dr. Mitchell really used both of these means; for therapeutist of high order though he was, he fully appreciated, too, the value of independence, and sought faithfully to encourage it among his patients. Nevertheless, it seems clear that what his instinct felt to be the main need of the hour was that each invalid should have demonstrated to him, by the logic of facts, that his indigestion was not invincible, but that his physician's command of the situation was. What hungry person, even though a neurasthenic, could fail to welcome, without complaint of indigestion, the slender portions of skimmed milk with which the treatment started in? Or what fatigue-fearing patient could venture to speak longer of fatigue when the only effort allowed to him was that of brushing his own teeth?

Sir William Osler, in a letter to the *British Medical Journal* concerning Dr. Mitchell, writes interestingly of the clinical emergency which was the occasion of the theory of the rest cure. In Dr. Mitchell's own graphic terms he gives the history of the patient, a Mrs. S. of Bangor, Maine, telling of her school life, her marriage and nervous breakdown, and of the conflicting thoughts that passed through Dr. Mitchell's mind as he stood at the foot of her bed, doubtful what course he should pursue. The story ends with the statement that the patient was sent back to Bangor perfectly well, that she afterwards bore many children, and had been the soul of many enterprises in her native town. Dr. John K. Mitchell, in the kind letter above alluded to, tells me that this lady from Bangor, who was treated in February, March, and April, 1874, has recently written him a pleasant note accompanied with a portrait of herself.

Dr. Mitchell never taught in either of the great medical schools of Philadelphia, but he did excellent work for many years as trustee of the Carnegie Institute, and performed conspicuous service in securing the endowment for the splendid building of the College of Physicians in Philadelphia, now an important medical centre, containing a collection of books equalled, I believe, only by the Surgeon-General's Library at Washington. In this latter undertaking, as in so many others, his co-worker was the genial, single-minded, and public-spirited Dr. William W. Keen, who, from being his valued assistant in the army, became his life-long friend.

As a literary man, Dr. Mitchell has a large number of admirers, as we all know, and there are doubtless many members of this society who would be far better able to give a just estimate of his work than I can do. His output of stories and poems was very large, and I can aver that many of the poems are full of interest and charm. Those who are interested will find some account of Dr. Mitchell as poet in an article written by Robert Haven Schauffler and published in the *Century* for December. The poems dealt with there are finer specimens of his work than those which I shall quote, but in glancing over one small volume I was much struck with his power of endowing with the delicacy of his own feeling the sights and sounds of nature of which he was so fond. How the soul of the wave and fog and the soul of the man seem to interpenetrate, for example, in these lines:

STORM-WAVES AND FOG ON DORR'S POINT, BAR HARBOR.

The fog's gray curtain round me draws,
And leaves no world to me
Save this swift drama of the stirred
And restless sea.

Forth of the shrouding fog they roll,
As from a viewless world,
Leap, spectral white, and, pausing, break,
In thunder hurled.

Ever they climb and cling anew,
Slide from the smooth rock wall,
With thin white fingers grip the weeds
And seaward crawl.

In rhythmic rote o'er shivering sands
They glide adown the shore
With murmurous whispering of "Hush!"
And then no more.

Equally sympathetic is his appreciation of the harsh and tuneless but thrilling note of the sea-gull, as shown by the following verses selected from a much longer poem:

The woods are full of merry minstrelsy;
Glad are the hedges with the notes of spring;
But o'er the sad and uncompanioned sea
No love-born voices ring.

Thou silent raider of the abounding sea,
Intent and resolute, ah, who may guess
What primal notes of gladness thou hast lost
In this vast loneliness!

Where bides thy mate? On some lorn ocean rock
Seaward she watches. Hark! the one shrill cry,
Strident and harsh, across the wave shall be
Her welcome—thy reply.

Home! for the night wind signals, "Get thee home";
Home, hardy admiral of the rolling deep;
Home from the foray! Home! That silenced song
Love's endless echoes keep.

For more than one cause then, Dr. Mitchell, whose achievements kept him in the forefront of a large band of distinguished men throughout a big and brimming half century, and made him almost as well known as the city with which he was so intimately identified, deserves to be remembered as a great man, and one filled abundantly with the wine of the intellect and of the spirit. Always eager, always virtually working even when nominally resting, warmly sympathetic, and in the best sense self-forgetting, his eighty-five laborious years were spent in the courageous service of the truth as he saw it, and in the constant presence of ideals and visions, of which his books and poems, his estimate of Phillips Brooks and of his own invalid sister, and the admiring voices of his friends, give willing evidence. Very different though his life was, in its external features, from that of the Canadian poet, William Henry Drummond, in memory of whom he wrote some charming and warm-hearted lines, published in 1910, these lines well describe a side of himself that was perhaps not the one most widely known, and with them this slight sketch may close:

IN MEMORY OF WILLIAM HENRY DRUMMOND.

Peace to his poet soul. Full well he knew
To sing for those who know not how to praise
The woodsman's life, the farmer's patient toil,
The peaceful drama of laborious days.

He made his own the thoughts of simple men,
And with the touch that makes the world akin,
A welcome guest of lonely cabin homes,
Found, too, no heart he could not enter in.

The toil-worn doctor, women, children, men,
The humble heroes of the lumber drives,
Love, laugh, or weep along his peopled verse,
Blithe mid the pathos of their meagre lives.

While thus the poet-love interpreted,
He left us pictures no one may forget—
Courteau, Baptiste, Camille mon frère, and, best,
The good, brave curè, he of Calumette.

With nature as with man at home, he loved
The silent forest and the birches' flight
Down the white peril of the rapids' rush,
And the cold glamour of the Northern night.

Some mystery of genius haunts his page,
Some wonder-secret of the poet's spell
Died with this master of the peasant thought.
Peace to this Northland singer, and farewell!

[Since this hasty sketch was written, Dr. Mitchell's exceedingly interesting Chicago address has been published (*Journal of the American Medical Association*, May 9, 1914), telling of the work of the Medical Department of the United States Army during the Civil War, and something more of his own labors and those of his personal colleagues than was within my knowledge. In many respects this warm and able essay, written hardly more than a year before Dr. Mitchell's death, helps to place vividly before us the personality of its intensely human, life- and labor-loving writer.]

Original Articles.

REMARKS ON DIAGNOSIS AND TREATMENT OF DISEASE OF THE STOMACH.*

BY FRANKLIN W. WHITE, M.D., BOSTON,

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I WILL speak first of some new methods of diagnosis and some old methods which have new values. The history has always been the most important factor in diagnosis and still is, in spite of the development of new methods. The history holds first place and the x-ray and the chemical tests divide the second and third places between them. No one symptom is distinctive however. Moynihan's statement, that "hyperacidity is ulcer" is not strictly true. Hyperacidity is one of the most common conditions of the stomach, due to a variety of causes and as seen in our Out-Patient Department and in private work most cases recover under careful treatment and show no signs of ulcer. There is always a small group which do not yield to medical treatment and which are sent to the surgeon. These are the most severe and trying cases and the only ones which the surgeon ordinarily sees. Here the per cent. of ulcer is high and prompts the statement which Moynihan has made. We must remember, however, that cases are carefully sifted before reaching the surgeon and surgical statistics are only of value for the class of cases seen by the surgeon.

TESTS OF SECRETION.

The stomach tube still holds its own as a means of testing gastric secretion. The Desmoid test, Einhorn's bead test, the string test of secretion, are comparatively unreliable and are little used. Chemical tests were formerly far too highly valued and now have been put in their proper place. The old days when a physician sent a specimen of stomach contents to a laboratory or consultant for complete diagnosis have passed, never to return. We are no more able to make a complete diagnosis from the stomach contents *alone* than we are from the examination of the urine. The tests have much value and we could not do without them, but they rarely make an in-

* Read at the Boston City Hospital, Clinical Meeting, Feb. 12, 1914.

dependent diagnosis and in some cases like duodenal ulcer they show surprisingly little.

There has been little change in the tests used in the last ten or fifteen years with the single exception of tests for blood. Here we may say that too much activity has been shown. Starting with the old Guaiac test, new tests have been brought out each more delicate than the last, such as the Benzidin, Phenolphthalein and Toluidin tests. Extreme delicacy is not desirable in these blood tests, any more than in a test for lactic acid or for mucus. It is possible to find blood so frequently with a very delicate test that it has no value in diagnosis. Blood tests are used everywhere nowadays to detect and rule out gastro intestinal ulceration and the ideal test should be simple and easy and not too delicate or too coarse.

In my opinion the ordinary Guaiac test is a rough test, not delicate enough for clinical purposes. Since it will not show blood in the feces with an ordinary meat diet, how can we expect it to show traces of blood which come from an ulcer? A recent report from the Mayo Clinic shows that the Guaiac test did not detect blood in the stomach contents in more than half the cases of gastric cancer In my opinion the Benzidin test is the best test. It is recommended by all the recent text books; I have used it for years and found it simpler and easier and far more reliable than the Guaiac test for detecting traces of blood. Pure reagents clean glassware, and a proper technique are necessary for satisfactory results.

This test like most others which are used for blood can be made too delicate for clinical work. I think Schlesinger and Holst's modification of the test is the best, using two drops of gastric contents or two drops of a mixture of feces and water for making the test. The technique has been fully described by the author in previous papers.[1]

This test has been slow in reaching Boston for some reason, but I am glad to see it in routine use here at the hospital at the present time. I have given both the Phenolphthalein and Toluidin tests a thorough trial and find them less satisfactory for clinical work.

TESTS OF MOTILITY.

This is the most important gastric function or at least the one which makes the most trouble if deranged. The stomach tube has been our reliance in making this test by finding fasting residue in the morning, of a test supper given 12 hours before, but now the tube comes in for its share of criticism. The x-ray shows that the tube may coil up in the stomach and avoid the residue and make the test useless and misleading; in other words, the radiologist says,[2] "When we pass the tube in the morning to recover fasting contents and find none, we do not know whether none is there or whether we have simply missed it." Such a poor result may occur without doubt, but I believe it may be avoided by proper technique. In the first place the stomach tube should be a straight one, kept straight by being hung up by the tail. It is often kept coiled by the maker and often kept coiled by the physician who uses it. This is a mistake. The coiled tube is much more likely to kink and curl up in the stomach while the straight tube has little tendency to do so. In the second place it is very desirable to use gentle aspiration in obtaining fasting contents and not to trust to syphonage or expression through the tube. It is obviously impossible to start a syphon with only a few teaspoons of stomach contents. A soft Pollitzer bag of the type made by the Davol Rubber Co., easily detachable is the best aspirator and will, if the stomach tube is moved back and forth during aspiration, recover even small traces of fasting residue. Finally if the stomach is washed out at the end of this process with a bulb full of water I think we are practically sure to detect traces of food if they are present in the stomach. This test of the stomach motility with the tube is in my opinion a very reliable one and not easily replaced by any other method.

Tests of motility made with the stomach tube and by the x-ray after a bismuth meal are not exactly comparable. They run parallel to one another in a general way, but the natural meal may leave the stomach either earlier or later than the bismuth meal. The cause for this we do not know. It may be that sometimes the bismuth acts as a foreign body and hastens emptying of the stomach or that in other cases it sticks to the wall and remains longer than food. The time of passage of natural meals is what we really wish to know.

In diagnosis of the motor power of the stomach the tests probably have equal value. The difference is that for many years, thousands of men all over the world have used the tube test. We have had enormous experience with it and know how to interpret its results; we have had much less experience with the x-ray method at the present time.

THE X-RAY.

The x-ray has been a very great help in diagnosis of diseases of the stomach. It shows the position, size and shape of the stomach as no other method will do, and most important of all it shows constant deformities in outline, due to ulcer, tumor or adhesions. It has been a great help in separating the medical from the surgical stomach cases. So much new data about the stomach has been obtained by the x-ray that at present it is in a somewhat undigested state and rather confusing. Some men use chiefly plates and give us one set of results, other men use chiefly the screen and give another set of results. The bismuth meals used are quite different in both

size and quantity. Different amounts and kinds of foods are used and different salts of bismuth and barium so that the results obtained by different men are not comparable. It seems as if a standard bismuth meal just as we have a standard Ewald-Boas test breakfast would be a great advantage.

In addition the x-ray men are not entirely in accord among themselves on important points of technique and diagnosis. To speak of one or two specific instances: Some men lay great stress on the importance of diagnosing a six hour bismuth residue in the stomach. Holzknecht has developed an elaborate scheme based on such observations as, "Atony never gives a six hour residue," "Gastric ulcer always gives a six hour residue." This is too dogmatic and is not true with the bismuth meals generally used. Atony may give an eight or ten hour residue and in fully half the gastric ulcers the stomach may empty in six hours. Other x-ray men consider a six hour residue the least important factor in diagnosis, merely a symptom depending on a great variety of causes.

Spasm of portions of the stomach has been a great source of error in diagnosis. They come from too many causes outside the stomach such as the gall-bladder, appendix, renal calculus, tabes and drugs, to be of much value in the diagnosis of gastric ulcer.

The x-ray appears to be somewhat in the position of the chemical tests ten or fifteen years ago, when it was said "lactic acid means cancer," "free HCl and a trace of blood means ulcer." These things have not proved to be true; there is a danger in being too dogmatic with too little experience.

On the other hand direct evidence of constant deformities has great value, as for example in duodenal ulcer. In a modest series of private cases in which an x-ray diagnosis of duodenal ulcer was made, the cases which came to operation proved the x-ray diagnosis to be correct in every instance. (I must admit that all these cases were typical and a definite diagnosis was made by older methods before sending them to the radiologist for confirmation.) Whether the reverse is true, or not, that is, whether a negative x-ray examination means no ulcer, I cannot say. My experience does not go so far. It is not easy to prove since the cases are less likely to be operated upon.

With adhesions about the pylorus it does not seem fair to expect the x-ray to show the cause, such as a previous ulcer, or gall bladder inflammation, but simply to show their presence by the deformity they produce, and let other clinical methods decide about their origin.

There is some doubt whether or not the x-ray can make a diagnosis of cancer of the stomach earlier than other methods, except in an occasional case. It certainly seems possible that it may detect mechanical changes in the wall of the stomach due to cancer of the fundus, or away from the pylorus, before changes in secretion have occurred or any considerable disturbance of the general health. I am sorry to say that I have had little experience with early cancer as most of the cases that are sent to me for diagnosis have already passed the early stage.

The x-ray is not an independent method of diagnosis. It should be used with the history and the chemical tests to get the best results in difficult cases. One x-ray man of this city said to me recently, "I have to urge men to make the chemical tests in the stomach cases which they send to me for diagnosis. They apparently feel that if an x-ray examination is made, nothing more is necessary." This attitude is wrong and shows that the pendulum is swinging too far toward the new method.

SYPHILIS.

The relation of syphilis to ulcer of the stomach is important. Syphilis has been always considered one of the rarest diseases of the stomach. We may have to change our opinion about this. The Wassermann reaction has detected an enormous amount of latent syphilis in heart, vascular and renal cases and may perhaps do the same with regard to the stomach. My attention was called to the importance of syphilis by having several successive cases of peptic ulcer this fall with a triple positive Wassermann reaction. This may be simply a coincidence, but it may be more than this. Any patient who has syphilis may develop a peptic ulcer as an independent disease, but it is also possible that some of our chronic ulcers are syphilitic in origin. Two of the patients referred to were given antisyphilitic treatment and treatment of the stomach combined and made an excellent recovery. The cases are too recent to know about recurrence and are not conclusive.

It would be much more definite if we find we can take such cases which have resisted ordinary thorough medical treatment and promptly cure them by giving the ulcer anti-syphilitic treatment. I think the subject is so important that it is worth while to try the Wassermann reaction in every chronic peptic ulcer. We may save some from the necessity of operation. I can see no reason to expect the x-ray to help us to distinguish a syphilitic ulcer from other ulcers of the stomach.

CANCER FROM ULCER.

The question of the development of cancer from chronic ulcer of the stomach is important and there is much conflicting opinion about its frequency. The old figures gave us six or seven per cent. of cancer developing from previous ulcer. Moynihan and the Mayo clinic place the figures about ten times as high, namely they believe that 60 to 70% of gastric cancer de-

velops from previous ulcer. It is difficult to reconcile these high figures with our clinical experience. I recently looked over my records of 100 cases of cancer for evidence on this point and found that a large majority of the cancer cases had a short history of digestive trouble; that less than one quarter of the cases had had any previous digestive trouble, and that less than one-tenth presented real evidence of preceding ulcer. Furthermore in a small group of ulcer cases followed for years without operation, the development of cancer is a great rarity.

While this clinical evidence is not absolutely conclusive it leads me to believe that the above figures, 60 to 70% are really far too high to represent the average run of cases of cancer of the stomach; that while they may be true for the carefully sifted and selected material of these surgical clinics, they do not represent the conditions met with in every day practice. My own impression is that less than one quarter of the cancers of the stomach develop from previous ulcer and perhaps the actual figures are much lower than this. Bearing these things in mind it certainly is not desirable to send every ulcer case to the surgeon as soon as the diagnosis is made, neither is it desirable for the surgeon to resect every accessible ulcer of the stomach.

TREATMENT.

I will speak briefly of a few of the newer drugs. Hydrogen peroxide, used internally by Petri in 1908, has a great power of lowering the acid of the stomach. This was first thought due to depression of the acid secretion, and later to neutralizing it by the alkaline product of the stimulated surface epithelium. I have found doses of two to four teaspoonfuls in a glass of water after meals very useful for temporary relief in hyperacidity of all sorts. Big doses such as Petri used (nearly two oz.) are likely to irritate the stomach and cause nausea. I have used it in conjunction with alkalies and oils and a proper diet.

Some new drugs have appeared for increasing the acid in the stomach. Acidol tablets which equal 12 drops of dilute HCl and are taken in a tumbler of water, have no advantage over the old acid preparation except convenience in carrying about, and cost much more. Oxyntin, which only increases the *combined* not the *free* HCl in the stomach can have little effect on peptic digestion.

Pankreon a preparation of pancreatin, much advertised and used on the continent, is claimed to be unaffected by the gastric fluids and to reach the bowel in an active state. The Council of Pharmacy of the A.M.A. found that it was promptly digested by pepsin in acid solution and thus rendered inert in the stomach before reaching the bowel.

Hormonal the peristaltic hormone of Zuelzer given with the object of physiologically stimulating peristalsis has proved so toxic and dangerous in occasional cases that it seems unwise to use it.

Anesthesin, an insoluble local anasthetic similar to Orthoform in its action, has proved useful in sensitive stomachs in nervous people. The modern method in all nervous dyspepsias, however, is to treat the patient more and the stomach less. We really depend on rest, hygiene, sedatives feeding up and encouragement, while most of the "special apparatus," intra-gastric douches, and electrodes, powder blowers, gyromeles, etc., which lumbered up the older textbooks on diseases of the stomach are rarely seen or used today.

Even lavage in spite of all the ingenious apparatus devised, is much less used than formerly, one reason being that the patient whose stomach persistently refuses to empty without help, wisely seeks a surgeon.

On the other hand not every patient with fasting residue in the stomach needs a surgeon. The stomach like the heart may have its periods of dilatation and decompensation and in some cases of atony and ptosis may fail miserably of emptying itself now and then. Here lavage with rest and diet may work wonders. I have seen within a week two patients of this type in whose fasting stomachs I found a half a pint of coarse food residue ten or fifteen years ago. Medical treatment gave prompt relief and they have been well for years.

Duodenal intubation is a new method used by Einhorn for treatment of peptic ulcer. A small soft rubber tube is passed into the duodenum and left in place continuously for ten or twelve days and food is poured through it directly into the bowel. The object is to free the ulcer from the irritation of food and gastric secretion and heal it quickly. A few men have used the method and reported good results, but it has not come into general use. I have tried it in a few cases with poor success. The constant presence of the tube was usually trying and the feeding often caused distress. I must confess that the continuous presence of an indigestible foreign body is not my idea of "giving the stomach a complete rest." The method is still on trial.

I have said nothing about diet in this brief review, not because it lacks importance, but because I have discovered nothing really new within the past year or two.

In surgery I notice less tendency to operate on non-obstructive peptic ulcers, evidently because the results have not been as good as in the obstructive cases. The x-ray clearly shows that in the former the food continues to pass out through the open pylorus instead of by the new surgical opening. The food continues to irritate the ulcer and the new opening tends to close and conditions are left as before operation. This makes the surgeon less eager to operate on some border line non-obstructive cases, and where operation is clearly indicated by reason of failure of medical treatment, inclines him to

close the pylorus at the time gastro-enterostomy is done.

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SIGNIFICANCE OF MINIMAL MACROSCOPIC GASTRIC STASIS.

BY A. EVERETT AUSTIN, M.D., BOSTON,

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VON NOORDEN long ago called attention to the fact that while the stomach was subject to abnormalities of secretion and motility, the latter, particularly when they produced retention, were the only ones to actually cause a change in the metabolism of the body, because much of the nutritive value of the food is destroyed by fermentative and putrefactive processes. True, the hypersecretions by producing pain induce the patient to eat less food, and emaciation follows, but if the patient can be assured that a generous, well selected diet is beneficial to his condition rather than otherwise, and is the very best means of controlling the suffering, an equilibrium can soon be established; this cannot be done where stasis exists dependent on pyloric narrowing, since almost every effort to increase the amount of nourishment is overcome by the periodical onset of vomiting or the increased distress of the victim. Hence it behooves us to detect the very earliest manifestations of retention in order to forestall the subsequent malnutrition. At just this point we come upon two causes of delay of gastric contents in the viscus, as unlike as the two regions are described to be where we are supposed to pass our future life. Unfortunately, too, the clinical signs in the early stages differ from each other only in degree and that largely of time. When retention or delay arises from gastric myasthenia, a meal of a beefsteak, four tablespoons of mashed potato and bread and butter should leave the stomach in eight hours while, if due to pyloric narrowing, it may not leave for fourteen hours. As can be seen, there is no hard and fixed line of division, yet everything depends on this decision for the following reasons: a gastric myasthenia is either associated with a general weakness of the whole muscular system so commonly seen in the Stiller type with narrow chest and acute substernal angle, concave epigastrium and protruding region about the navel, often congenital or is the result of a general enteroptosis following repeated child bearing, hernia, or the weakening of abdominal muscles by laparotomy scars. Here operation other than a shortening of the gastrohepatic ligament, whose value has not been fully demonstrated, is of no avail, and only roborant measures can be employed The other condition, true pyloric narrowing, is dependent on scar tissue from ulcer, cancer or adhesions from cholecystitis. Intermittent spasmodic narrowing due to gastric hypersecretion is maintained, but at least it cannot be common, and there must be periods when free egress of the contents occurs and retention of any considerable degree ceases. For stasis due to pyloric narrowing, only gastrojejunostomy gives any permanent relief, while this operation does not aid myasthenia in the slightest degree. Thus we are driven to employ our greatest ingenuity in separating these conditions so essentially unlike, but with such similar manifestations. Nor is it permissible to wait until visible peristalsis and gastric rigidity make the differentiation so evident that "He who runs may read." Then the stomach has become distinctly dilated and as a result of the fermentation and vomiting the patient has become more or less emaciated, adding greatly to the danger and prolongation of the convalescence from the operation which must follow. An illustration of this is shown in the following case.

CASE 1. A man, 42 years of age of excellent habits who had had "stomach trouble" not clearly defined for a long period (two or three years, as near as he could recall), began three months ago to suffer more severely. He had epigastric pain after every meal, but it was more severe when he ate heartily, for his appetite remained good. There were eructations of sour fluid 3-4 hours after the food and once in two days, particularly at night, vomiting of large quantities of sour tasting fluid containing recognizable food fragments without any particular association of pain other than the distress mentioned. He had lost 20 pounds in weight though he was eating well and his movements were irregular and induced largely by laxatives.

The physical examination showed excellent teeth, no cachexia, no glandular involvement, while the heart and lungs were without significance.

The stomach was found to fill the whole abdomen; spurting could be felt and heard over the pylorus, but there was no mass, no resistance, but little tenderness, and no gastric waves could be distinguished. The fasting stomach washings, 18 hours after food, contained all forms of food fragments with numerous sarcinae and free hydrochloric acid. The gastric contents six hours after a chicken sandwich amounted to 400 c.c., had a musty odor with many bubbles, and the solid portion was one-third of the whole. Free hydrochloric acid was present and the acidities were 33 and 98. Sarcinae were abundant, but there were no Boas-Oppler bacilli. The clinical diagnosis was pyloric stenosis due to ulcer. The surgeon's report was duodenal adhesions, scar of an old duodenal ulcer, constriction of the ascending portion of the intestine and collapse beyond. The stomach was enormously dilated but no glands were found anywhere.

Of course every effort should be made to make a much earlier diagnosis than was made in this

case, and various articles of food have been suggested which are known to leave the stomach with more or less difficulty, such as currants, raisins and rice, while it has come to my attention that lima beans, particularly the outer coverings, are long delayed in their departure. Then again we are advised to depend on the microscopical detection of food fragments at a sufficient period after an evening meal. Unfortunately, the former articles may pass out of a stomach with moderate pyloric stenosis within the prescribed time, as is shown by the following case:—

CASE 2. A girl of 29 years was well to 5 years ago, when she began to have pain coming on after eating. She remained in a hospital 8 weeks, where her stomach was washed out 30 times. She was better for 6 months, when her former pain after eating recurred. Two years ago she returned to the hospital, where her appendix was removed. Again there was a remission of her symptoms for 18 months, when her old symptoms returned much exaggerated. At present she has gaseous and fluid eructations which are very acid and come on one to two hours after food. She has pain at this time which she localizes over the old appendix scar.

If the pain is severe, she vomits, an event which occurs about 4 times weekly, and may occur at night; the vomitus is always very sour and contains food but never blood. She has lost 13 pounds in weight during the six months, but confesses that she has eaten much less for fear of aggravating the pain. Her bowels move every second day and the stools are very hard. Menses always painful and last 3 days but no clots are ever passed.

Physical examination showed a very pale individual with gums and conjunctivae almost colorless. The hemoglobin was 75% (Tallquist). The teeth were good, the tongue lightly coated, the chest narrow with acute substernal angle, but the heart and lungs were without significance. The stomach's dimensions were 21 vertical by 23 cm. horizontal, extending 5 cm. below the navel and 8 cm. to the right of the median line. There was a well defined tender spot just above and to the right of the navel and a spot of similar character in the right back just below the insertion of the tenth rib. What was taken for a contracted pylorus was felt under the tender spot in front, but no masses nor undue rigidity were detected. The fasting stomach after the evening Riegel meal with the addition of rice and raisins contained no gross food fragments nor mucus. The stool after three days' meat-free diet, contained no occult blood (modified Weber). After the test breakfast the gastric content had free hydrochloric acid with acidities of 60 and 85. There were no sarcinae nor mucus. The radiologist reported that the pylorus was well defined, the first part of the duodenum filled, an enlargement of the stomach in the longitudinal direction, and on standing the lower border was in the pelvis; no stasis could be discovered. The operation showed an ulcer scar on the posterior surface of the duodenum adjacent to the pylorus with numerous adhesions, for which a gastrojejunostomy was done.

It is almost incredible that there was not, at periods, sufficient pyloric narrowing to cause the vomiting, yet the raisins passed through without hindrance.

Then again we may err at the other extreme when some food residue is found by lavage of the fasting stomach, but the laparotomy shows no narrowing and the stasis must be ascribed to myasthenia, as is proven by the case which follows:

CASE 3. A man, 45 years of age, an architect, of excellent habits, using neither tobacco nor alcohol, had been well to two years ago, when a torticollis had been relieved by cutting the muscle, following which he had passed ten months in a sanatorium for neurasthenia. For the five months subsequent to his coming under my care he had had sour stomach, acid eructations, water brash, and his bowels had been confined, requiring the frequent use of laxatives. He thought he felt better when there was food in his stomach than when it was empty, but food did not play an important part in his discomfort. Eructations often continued for 6 hours after he had eaten. At no time was there any severe pain, except one night recently when the pain in the epigastrium was so severe that he vomited food which was extremely sour to the taste. He was sure the vomitus was not brown nor red. His weight had remained constant for many years at 153-5 and he weighed 155 in my office. Examination showed his head to be still slightly drawn to the left, his teeth good, his tongue but lightly coated and his sclerae free from yellowing. Sound heart and lungs were found and no involvement of the glandular system was discovered. His abdomen was full, symmetrical and without tender points. Under inflation the stomach extended from the 6th rib to two fingers above the navel on the left, while on the right it extended beyond its usual limit and the tympany encroached on the liver space. Under the right costal border a hard mass could be felt to slip under the examining fingers on full inspiration, but was not perceptible on expiration. It gave the impression of a sausage-shaped body, but only the lower border was perceptible. The fasting stomach after the evening Riegel meal contained food fragments in very diminutive quantities, upon lavage, among which the raisin fragments could be detected. After a test breakfast the contents contained no free hydrochloric acid, but the total acidity was 85. No sarcinae nor Boas-Oppler bacilli were found. The feces after a meat-free diet never contained occult blood. The urine was normal. The radiologist reported a stomach normal in size, shape and contour, but under the screen no food could be seen to pass through the pylorus. The individual was passed on to the surgeon with a provisional diagnosis of early malignant disease of the pylorus, when, much to my surprise, when the abdomen was opened by him an almost gangrenous gall bladder was displayed containing one large stone and much debris, but the pylorus was entirely normal and entirely free.

Under such conditions, of course, we must hold a myasthenia responsible for the minimal retention, but such an occurrence warns us against placing too much confidence in the slight stasis which this meager remnant or microscopic residue represents.

Much discussion has been aroused as to

whether, when lavage of the fasting stomach produces food fragments, while the radiograph at a six-hour interval shows no stasis, we are to place our reliance on the one or the other. It would seem that the explanation of the other horn of the dilemma, when radiology shows stasis and the tube does not, is not explainable by the bending of the tube by which it follows the lesser curvature, since it was one of the teachings of Boas that the lower border of the stomach could be determined by palpation of the tube after it was introduced. Especially when lavage follows, this explanation would be less tenable because, after the introduction of two liters of water, in four portions, any food residue must be brought to light unless we were dealing with an hour-glass constriction. Huerter thinks that the excessive hydrochloric acid in many instances of myasthenia keeps the pylorus closed much beyond its usual period, while the acid contents entering the duodenum are being neutralized and thus simulates a minor stasis when lavage is employed, while the neutralizing effect of the contrast meal (bismuth subcarbonate) checks this tendency when radiology is employed. If these premises are true, then in case of contradictory results, we must rely with greater assurance upon the radiologic method. At least we must employ both methods and, if they agree, we proceed to operative intervention with greater confidence. It has been my experience in many instances where lavage showed morning residue and the radiogram did not indicate stasis, that subsequent treatment with alkalies and atropine brought about a condition where lavage no longer brought forth food remnants under the same restrictions as formerly.

Now, since raisins have proved deceptive for testing motility and the so-called microscopic retention is evanescent, coming and going without any known cause, if many observations on a myasthenic individual are made, we must have recourse to some more reliable method for the detection of early pyloric stenosis. The criterion which I have adopted is the one recommended by Hausmann and consists of the retention of starch granules of sufficient amount to be visible to the eye at least 12 or more hours after a liberal portion of boiled rice or rice pudding has been eaten in conjunction with meat, potato, bread and butter. All patients after such a meal come to the clinic fasting, when they are washed out with one or two liters of water in portions of 500 ccm., according to whether the first returns clear. As it is very difficult to determine whether a residue, if present, is made up of starch remnants or mucus mixed with partially digested epithelial cells, on account of the similarity of color, the washings are allowed to stand in a conical glass when the solid part will soon fall to the bottom. The supernatant fluid is then poured off and Lugol's solution added to the solid portion, with which it is thoroughly mixed. An instantaneous bluish coloration will appear, were the residue starch. No matter how small the remnant may be apart from mere isolated microscopic granules, it becomes readily visible and may be found as late as sixteen hours after the rice is taken where the stasis is marked, but still not so gross as to cause large accumulations of residual food in the stomach as is found in advanced pyloric cancer and callous ulcer. When this condition exists, which should be verified by at least two examinations, and better three at week intervals, I have always found that there is a pyloric narrowing due to organic disease, as verified by operation, or where that was refused, by steadily increasing difficulty in the stomach's emptying itself and greater residue in the period following. One must not rely upon a single instance of this occurrence, for I have repeatedly seen a fairly copious amylaceous residue at the first lavage, disappear at a subsequent washing, under the identical conditions as to amount of food and time, one week later.

Such temporary and periodic increase in the weakness of a myasthenic stomach to which such retention is due, arises from various causes. I have seen them after a severe cold where there has been much irritating cough, with an accession of constipation and more rarely when there is a coexisting chronic appendicitis. It has been my practice, too, to add the raisins to the evening meal, and have been very much surprised in routine washing of the fasting to note how infrequently fragments of the fruit can be found and how much more constantly the gross starch remnants are discernible when the residue is treated as suggested. There is no explanation for the fact that raisins will pass through an opening which will hold the rice back. Some have offered the explanation that it is not the narrowing as such that holds the rice, but the depression in the stomach's surface afforded by a chronic ulcer, much as the bismuth adheres which produces the flecks in the radiogram and persists on the wall of the organ long after the rest of the contrast meal has disappeared. If this is true, then the minimal macroscopic residue would have a double significance of pyloric narrowing or an old ulcer scar, not necessarily at the pylorus. My personal experience, however, has led me to believe on account of the ephemeral nature of this finding that it is due to myasthenia and for some unaccountable reason, the weakened stomach can free itself more readily from the raisins than from the starch. When the residue is persistent and there is progressive narrowing, then the rice and the raisins pursue a parallel course and both can be removed at every washing. Another suggestive factor in favor of the theory that microscopic amylaceous residue may be found from adherence to an ulcer scar is the simultaneous presence of bile in the wash water, while when any considerable amount of starch (*i.e.* macroscopic) is found, bile is rarely, if ever found. Hence microscopic starch granules with bile are indicative of chronic ulcer with imperfectly closing pylorus or an exaggerated myasthenia, while macroscopic rice rem-

nants without bile may be interpreted as meaning an actual stenosis without, of course, indicating its nature.

Naturally, too, when retention results from the idiopathic pyloric closure of hypersecretion or continuous secretion, if such exist, which many doubt, the bile is never found; such at least is my experience that when from the fasting stomach any considerable portion of highly acid clear gastric juice may be drawn, this is never stained with bile. Similarly, if the wash water responds promptly and markedly to reagents for free hydrochloric acid when it is impossible to express the undiluted contents, and any considerable amount of starch is found, our color reactions are rarely disturbed by the peculiar coloration of bile. We may summarize these isolated facts by saying that: (1) A limited number of rice grains visible in the wash water only by means of the microscope, 12 hours or later after the evening meal when accompanied by marked hydrochloric acid reaction or bile, means a spasmodic closure of the pylorus or a myasthenia and is rarely permanent. (2) Currants or raisins may be retained for this period in a myasthenic stomach or sometimes pass through a moderate narrowing of the pylorus. (3) A distinct amylaceous residue made visible to the unaided eye by means of Lugol's solution, which is not accompanied by bile, but is by hydrochloric or organic acids, if persistent, means a mechanical hindrance to the egress of food from the stomach. (4) A wash water containing hydrochloric acid freely and microscopic starch remnants may indicate an old ulcer scar without a trace of gastric stenosis. (5) A minor gastric retention detected by lavage and unconfirmed by the radiograph is proof of pyloric spasm rather than stenosis, and will often disappear upon appropriate medical treatment. (6) A radiographic demonstration of gastric stasis, not substantiated by lavage, is oftenest due to myasthenia since the weakened gastric walls cannot free the stomach from the heavy bismuth within the accepted time.

BANTI'S DISEASE WITH REPORT OF SUCCESSFUL SPLENECTOMY.*

BY MILTON G. STURGIS, M.D., SEATTLE, WASH.

IN 1866, Gretzel, describing enlargement of the spleen in an infantile case from the clinics of Griesenger, first used the term, "splenic anaemia." Previously, non-leukaemic enlarged spleens had been described as pseudo-leukaemias.

There were few cases reported from that time until 1882, when Banti, an Italian pathologist, published his studies of cases of splenomegaly of unknown etiology, concluding that they constituted a distinct clinical disease, and divided this disease into three stages.

First, the stage of splenic enlargement with secondary anaemia; second, the stage in which the liver becomes palpable; and third, the ascitic stage. The secondary anaemia presented a fairly distinctive picture, in which the numbers of erythrocytes were ordinarily decreased, but not constantly, the color index lowered, nucleated reds or myelocytes were never found, the hemoglobin was decreased, a leucopaenia was sometimes present.

He was the first to give a comprehensive description of the pathology of this disease, as follows:[1] The spleen is much increased, weighing from 1 to 1.5 kilograms. The shape is preserved, the surface smooth and regular. The capsule is thickened, and on section, the substance is dark brown and hard, showing thickened trabeculae and whitish nodules, which correspond to the Malphigian bodies.

Microscopically, the Malphigian bodies were found in various stages of fibrous transformation, the process beginning around the vessel, within the body. A certain amount of hyaline transformation was also apparent. The splenic pulp showed no special enlargement of the venous channels. In the earliest stage, there may be found in some of the veins, a lining of large cells, making the vessels appear almost like an epithelial channel on cross-section. These large cells have a limited amount of protoplasm, and large nucleus of a diameter of from 5 to 8 microns. The same kind of cells are found in the reticulum surrounding the veins, and in some of the channels, the cells have become loosened from the walls, and fill the lumen of the vessel, giving the appearance of a cancerous alveolus. In some spaces actual giant cells and occasionally cells containing normal or degenerated red corpuscles were observed. The reticulum of the pulp was evidently thickened and of a hyaline appearance. This was always a conspicuous feature, and distinguished the tissue absolutely from normal spleen. The thickening of the reticulum is in proportion to the duration of the disease, and, finally, areas of the splenic pulp may become entirely fibrous.

In view of the process of fibrous transformation, and the multiplication of cells within the veins, Banti proposed the name, "fibro-adenia." He does not believe there is a new-formation of fibrous tissue in the ordinary sense of the term, but rather, an increase of the reticulum, from exudation from pre-existing cells.

The liver is reduced in size, granular, and hard. In earlier stages of the disease, it may be normal in size, and smooth. Microscopically, there is found a marked inter-lobular cirrhosis like that due to alcohol.

Banti calls particular attention to sclerotic endophlebitis of the splenic vein, causing irregular thickening and sometimes even athermatous and calcareous foci. These conditions also extend into the portal vein, and in the

* Read before the North Pacific Surgical Society at Seattle.

ascitic stage of the disease, even the mesenteric veins may be affected, though in less degree than the splenic. He found the disease more common in males, in young adult life, and described a symptomatology dependent on the weight of the spleen, the anaemia and ascites. He believed the anaemia to be due to the increased hemolytic action of the spleen.

He based his opinion that the spleen is primarily responsible for the clinical picture, on the following considerations. First, splenomegaly always preceded the anaemia; secondly, hepatic changes appeared last of all; thirdly, the changes in the spleen seemed to him to be peculiar to the disease, and the success of splenectomy suggested the diseased spleen as the chief factor in the cause of the disease.

Since the publication of Banti's first article, much has been written on this topic, and a diversity of opinion expressed which is most confusing. At present there seems to be three divisions of thought. First, those agreeing with Banti that the disease as described by him, constitutes a distinct clinical entity, accounting for a part of the splenic anaemias. Second, those who believe that Banti's Disease is but the terminal stage of primary splenic anaemia. Third, those who believe that it is not a primary disease, but is secondary to cirrhosis of the liver—a pre-cirrhotic splenic tumor.

In the cases recorded in literature so great has been the variation in the pathology, in the blood picture, and in the duration and intensity of the symptoms, that most clinicians and pathologists agree that Banti's Disease as a clinical entity does not exist; but reserve the term for the terminal stage of primary splenic anaemia, which, they agree, is a fairly definite clinical entity of unknown origin, characterized by a chronic course;—enlargement of the spleen, anaemia of a secondary type, a marked tendency to hemorrhage, and a liability in late stages to be associated with jaundice, cirrhosis of the liver, and ascites.[2]

As to the cause of this primary splenic enlargement, it has been suggested that it results from toxines absorbed from the gastro-intestinal tract, but this has not been proven; that it is secondary to the endo-phlebitis of the portal and splenic veins, but experimental studies occluding partially or wholly the splenic veins have failed to produce anything but primary congestion, followed by partial or total atrophy; that it is due to stasis in the portal circulation, but the splenomegaly always occurs before stasis is established; that there is a relationship between splenomegaly and tuberculosis, syphilis, or chronic malaria, regarding which it is interesting to note that Cohen of Philadelphia reports a case of typical clinical splenic anaemia where, after the use of large doses of quinine, plasmodia were found circulating in the blood. Recently, Gibson[3] reported that in five cases of Banti's Disease, a post-mortem study of the spleens disclosed a streptothrix present in each one.

Banti's theory of the anaemia being due to the increased hemolytic action of the spleen is acceptable to Rodman and Willard,[4] who draw an apt comparison between the hyperactivated thyroid exerting a deleterious action on the body, which is ameliorated or cured by the partial or total removal of the thyroid, and the hyperactivated spleen producing symptoms which are likewise relieved by the removal of the spleen. Others, notably Dock and Warthen and Stengel[5] take the stand that this is due to a bradyplastic condition of blood-forming organs and point to the fact that they found a marked hyperplasia of the hemo-lymph glands lying along the thoracic aorta and in the retro-peritoneum, which contained large numbers of cells holding red blood corpuscles and blood pigment, and in view of the pathology of the spleen, they concluded that this condition was compensatory.

Whether or not splenic anaemia can be considered as a clinical entity is still unsettled. We have a disease, the pathology of which is due to a chronic toxic irritant, having a selective action on the spleen; whether this toxin arises from one or several causes, is unknown but the work but recently done by Billings[6] in the treatment of Hodgkin's Disease, as well as the discovery that eclampsia is but the expression in the kidneys or liver of a ferment generated in the pathologic placenta, leads us to believe that this discovery when made, may change our entire conception of this disease.

The history of the case reported is by Dr. Moser who referred the patient.

A. W. White boy, aged 18. Family history negative. Father, mother, brothers and sisters, all living and well.

Patient came to us June 1, complaining of being continually tired, and of having a sense of fullness and dragging in left hypochondriac region. For the previous two years the patient has a sense of not being well, with intermissions of relative improvement; he noted times when his skin had a distinct yellowish color; various physicians had told him that he had liver trouble, for which he was treated. He was irritable and refractory to parental control; appetite was poor, often being entirely absent, and was somewhat perverted; at times he was nauseated and would vomit. This latter was apparently uninfluenced by the kind of food taken, or by the time of ingestion.

Of previous illness, the patient had had measles; no malaria, and no evidence of ever having lived in a malarial country. In July, 1909, he had received a gunshot wound, which necessitated amputation in the upper third of forearm. There ensued a discharge of pus from the wound and from an axillary abscess, which was cured by "scraping the bone" under anesthesia.

The patient is slender, of poor musculature, drooping shoulders, slow gait, and tired facies; the conjunctivae are jaundiced, as is the skin of the entire body. The teeth are sound. The gums are firm, and have no dark colored line on them. The

tonsils are neither enlarged nor scarred. The pupils are equal and react to light and distance. The thyroid gland is not enlarged; the thymus is not detected; the lymphatic glands are not generally palpable. The heart action is good; the apex beat inside the nipple line in 5th intercostal space. There are no murmurs, nor arrythmia. The lungs have good excursion, and no abnormal respiratory sounds are detected.

The abdomen has full contour, and is slightly distended. No "Caput Medusae" is present, and the navel is retracted. There is dullness in the flanks, which dullness seems to shift with changes of body position. The liver is not palpable at border of right costal arch.

The spleen can be easily palpated, and its lower border extends one-fourth of the way from left costal border to the umbilicus; it is not rigidly fixed, but is slightly movable; percussion over the splenic tumor elicits flatness.

Neither kidney is palpable. No varicosities exist in the lower extremities.

The patient was under our care from this time until a splenectomy was done upon him in December.

Our treatment consisted of a thirty days' course of iron plus Fowler's solution, as tonics and alteratives: salol and occasional exhibitions of calomel.

In August the patient became worse, having a remittent fever, of two weeks duration, ranging from 100° to 101° F. He had, at this time, a number of hemorrhages into the stomach with hematemesis, the blood being dark red in color, and slightly digested. Blood was also present in his urine. The hemoglobin fell to about 65%.

The hemorrhages were treated by complete rest in bed, fluid diet, ice to the abdomen, and calcium lactate, grs. x. t.i.d.

Following this time in August, the patient improved somewhat in weight and strength, his hemoglobins came up to about 80% and he had no visible hemorrhages. No examination was made for occult intestinal blood.

Urine: S. G. 1015, color—pale straw, no sugar, no albumen, indican occasionally, blood was present after during the month of August, about 1500 c.c. daily.

Blood: Hemoglobin 65-80%, leucocytes 8000, erythrocytes 4,000,000.

Differential count: Polys. 65, large monos. 5, small monos. 25, eosinophiles 3, transitional 2.

The reds were regular in size, and were evenly stained. No nucleated reds were detected.

At the time of the operation the liver dullness extended a finger's breadth below the ribs. The edge of the spleen was palpable two-thirds of the distance to the umbilicus.

Operation. Dec. 4, 1912. Incision 8 inches long was made through left rectus muscle. There was free fluid in the abdomen. Owing to severe perisplenitis, there was a band of extremely vascular adhesions an inch or more in width, extending from the one side of the splenic vessels around the border to the other side. The omentum was adherent to the anterior surface. Because of the density of the adhesions it was impossible to first clamp off the splenic vessels as is ordinarily done. The adhesions were stripped off, the bleeding being controlled by gauze, until the spleen was entirely free; it being then removed without difficulty. On removal of gauze there was slight bleeding, which was controlled by ligature, excepting a small area on the posterior surface of the diaphragm, where extensive oozing necessitated packing.

The wound was closed, and the patient returned to his room in considerable shock. He was suitably stimulated, and rallied well. There had been no traction on, nor injury to, the stomach, but seven hours after operation he vomited brown fluid, an hour later he vomited about three ounces of dark red blood, and shortly after, a large amount of blood clots. Twelve hours after operation, his temperature was 102° F., pulse 128, and respiration 34. He vomited dark blood each day for four days, and passed a large dark fluid bowel movement on the fourth day.

On the fourth day he developed a cough—a mild bronchitis—which persisted during his stay in the hospital, causing him very much discomfort.

The packing was removed on the third day, and the patient was able to leave the hospital on the 25th day. His temperature persisted at 100° to 101° F., up to the time of his leaving the hospital. Excepting this, he was in good physical condition, and had recovered a fair degree of strength.

Pathological report by Dr. O. J. West:—

Macroscopical Examination. Spleen 22 x 17 cm., weight 800 gms., normal shape preserved, color normal, surface smooth. Capsule is markedly thickened and shows evidence of extensive adhesion on anterior surface; cut surface, dark red except where ramifications from capsule penetrate to form trabeculae; these trabeculae are much thickened.

Microscopical Examination. Malpighian bodies show moderate fibrous increase; endothelial lining of vessels is hypertrophic and occasionally vagrant endothelial cells are seen. No malignancy, no infection necrosis or degeneration.

The findings are those of a chronic toxic spleen, with nothing to designate the source or nature of the toxic substance.

He suffers no discomforts and apparently enjoys excellent health; yet an examination of the blood made Feb. 28, 1914, shows the following condition.

Moderate poikilocytosis and anisocytosis.

Number of leucocytes per cm. (estimated) 8000

Differential count of leucocytes:—

Lymphocytes	43%
Large mononuclear and transitional	15%
Neutrophiles	34%
Eosinophiles	8%

This case presents some interesting features. The abnormalities of the blood 14 months after the removal of the spleen suggests that the anaemia is not due to hemolytic action of the spleen alone. In view of the findings of Gibson the history of the trauma to, and amputation of, the arm with resulting infection, followed within a year by the primary symptoms of this disease which were progressive up to the time of the removal of the spleen suggests that such infections may be the origin of the toxin.

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AN OPERATION FOR CORRECTING THE AQUILINE NASAL DEFORMITY. THE USE OF A NEW INSTRUMENT. REPORT OF A CASE.*

BY OLIVER A. LOTHROP, M.D., BOSTON,

Assistant Otologist, Massachusetts General Hospital; Clinical Assistant, Massachusetts Charitable Eye and Ear Infirmary.

THE nasal deformity often called the aquiline or Roman nose, is characterized by an excessive growth forward from the face of the nasal bones and septal cartilage, causing a hump or arching forward of the nose bridge. In extreme cases a very disfiguring deformity results, most noticeable in profile. In order to transform such a deformity into a normal nasal profile, this new operation has been devised.

General anesthesia is required for this operation and adrenalin chloride, applied to the mucous membrane of the septum and nasal bones, is very helpful in reducing the hemorrhage. Strict asepsis in every particular throughout the operation is imperative for a good result.

Technic. An incision is made on one side of the columella down on to the free edge of the septal cartilage. The muco-perichondrium is now elevated for a short distance on either side. If the septal cartilage has grown too long in this direction, so that the nose is too long and hangs over the upper lip, a suitable amount of the denuded cartilage is now removed. The muco-perichondrium is then elevated on both sides of the septum close under the nose bridge up to and under the nasal bones. The free border of the cartilage forming the bridge is now shaved down to the line desired for the reconstructed bridge. A piece of the perpendicular plate of the ethmoid close under the nasal bones is now removed, relieving all support at that point.

The next step in the operation consists in making an incision within the nostril along the free border of the nasal bone and ascending process of the superior maxilla. This incision cuts the mucous membrane and underlying tissues adherent to the free border of the bones and brings the operator beneath the periosteum covering the external surface of the nasal bone and ascending process. The periosteum elevator now raises all the periosteum over the nasal bone and ascending process of that side. The above technic is now repeated on the other side.

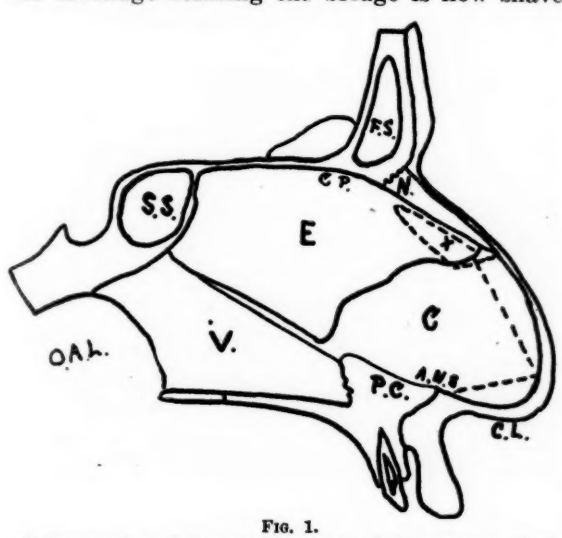

FIG. 1.

Median section of nose showing parts of the septum. *E.* Perpendicular plate of ethmoid. *V.* Vomer. *S.S.* Sphenoidal sinus. *C.P.* Region of cribriform plate. *F.S.* Frontal sinus. *N.* Nasal bone. *P.C.* Premaxillary crest. *A.N.S.* Anterior nasal spine. *C.L.* Columella. *C.* Septal cartilage, the broken line showing where it is cut to form the new borders. *X.* Section of perpendicular plate of ethmoid just beneath the nasal bones which must be removed.

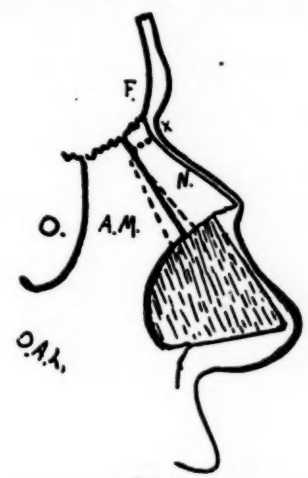

FIG. 2.

This figure shows the septal cartilage (shaded) with its re-shaped borders and the skin and soft tissues collapsing upon them. *N.* Nasal bone. *A.M.* Ascending process of superior maxilla. The broken lines enclose the triangular section on either side of the nose which must be removed to meet the newly-shaped border of the septal cartilage before depressing the arch formed by the nasal bones. *X.* At this point the nasal bones are fractured with a narrow chisel. *F.* Frontal bone. *O.* Orbit.

A triangular or v-shaped piece of bone is next removed subperiosteally from either side of the nose. This section includes a little of the nasal bone and some of the ascending process and has its acute angle near the fronto-nasal suture. In oder to remove this section cleanly, symmetrically and quickly, a new bone punch was devised for this operation. It is a heavy forceps just small enough to enter the vestibule, having a male blade and a female blade. The female blade has a triangular aperture, one-quarter of an inch at the base and seven-eighths of an inch on each of the other sides. The male blade fits into this area so that with one closure of the forceps the desired section can be removed.

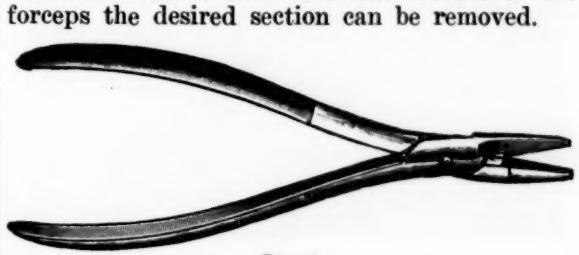

FIG. 3.

A new bone punch designed to remove a V-shaped section of bone.

* Read at a meeting of the New England Laryngological Society, March 24, 1914.

After the lateral V-shaped sections have been removed the nasal bones are fractured near the fronto-nasal suture with a narrow straight chisel. Protecting the soft tisues over the nasal bones, the latter can now be easily depressed with a blow from the mallet flush with the newly-shaped, free border of the septal cartilage.

If the nose is of the proper length the operation is finished. No packing or splinting is required. Light gauze pressure may be used over the nose for a few hours if desired to prevent a hematoma.

Should the nose be abnormally long, cartilage is removed from the free border at the columella as previously mentioned. Since all attachments of the soft tissues over the nasal skeleton have been cut or freed by elevating, the nose can be shortened to any desired length and held in that position with adhesive strips reaching on to the forehead until the soft tissues (periosteum) readhere to the reconstructed bony and cartilaginous framework. This technic makes possible the shortening of any nose exclusive of other deformity without excision of any tissue causing external scar.

Case Report. G. J., male, aged 30 years, medical student, was referred to me by Dr. Augustus Riley for nasal obstruction and deformity. The septum was straight and the obstruction complained of was due to collapsed alae nasi. Examination was otherwise negative and the external nasal deformity is shown in the accompanying illustration.

On January 9, 1914, he was operated upon. The technic of operation was identical with that above described. The operation consumed forty minutes and the patient made a good ether recovery. He never had any pain but there was considerable swelling and ecchymosis. His temperature recorded on a four-hourly chart, never went above the 98.6 line. On the fourth day after operation he left the hospital, at which time the swelling was

Photograph taken before operation showing the aquiline deformity and drooping tip of the nose.

Photograph taken two months after operation showing the results of correction.

Front view taken two months after operation.

rapidly subsiding, but it was not wholly gone for over two weeks. The adhesive plaster was removed on the third day and there was no tendency to elongation of the nose. However, to insure against a return to the former condition, the plaster strips were left in place for over two weeks. At present the nose is three-eighths of an inch shorter than before operation, the bridge is straight, and the nose is perfectly firm. The nose is still a little broader than before operation, which is probably due to periosteal thickening. Although branches of the nasal nerve must have been cut, patient observed no change in sensation at the tip.

One most gratifying, although perhaps unexpected, result of the operation was the marked improvement in breathing, noticed by the patient the first day after operation, notwithstanding the swollen condition of the nose. The shortening had relieved the collapsed condition of the alae nasi and had opened up the vestibules so that the patient had good breathing space.

ANAPHYLACTIC REACTIONS OCCURRING IN HORSE ASTHMA AFTER THE ADMINISTRATION OF DIPHTHERIA ANTITOXIN.*

BY J. L. GOODALE, M.D., BOSTON.

THE following paper is intended as a preliminary communication regarding the local phenomena occasioned by horse serum in individuals suffering from so-called horse asthma.

It has long been known that animals may be sensitized by an injection of foreign serum and examination of the literature shows a number of instances in man where a second injection of horse serum has been followed by alarming and even fatal results. It has also been observed that individuals who are subject to horse asthma may show anaphylactic shock, when given antitoxin from horses even though they have not previously been given an injection of horse serum. The suggestion was made by Rosenau and Anderson that these individuals may have been previously sensitized by the inhalation of particles of flying hairs from horses, carrying minute quantities of protein, causing local sensitization.

From these reports, it is sufficiently evident that the injection of horse serum in sensitized individuals may be extremely hazardous. We have, however, no observations, showing whether asthmatics in general are more subject to this danger than other individuals. Furthermore no studies have been made, so far as I know, to ascertain whether individuals suffering from horse asthma are actually peculiarly susceptible to horse serum.

* Read before the Boston Society for Medical Improvement, March 23, 1914.

In order to determine whether horse serum was capable of producing local disturbances at the point of contact, patients with a history of vasomotor disturbances were examined in one or both of the following ways.

1. The lobe of one ear was moistened with a drop of diphtheria antitoxin prepared by the Massachusetts State Board of Health, and a superficial cut was made with a needle, just sufficient to cause blood to appear, but not to flow.

2. A drop of the same antitoxin was placed in one nostril upon the anterior end of the lower turbinate.

Eighteen cases were examined. These may be grouped as follows:

1. Cases in which horses had been known to excite nasal vasomotor symptoms or an asthmatic attack.

2. Cases showing no reaction to horses, but in whom the asthma was apparently associated with bronchitis alone, or occurred only during the summer in connection with hayfever.

Eight cases with a history of sensitiveness to horses were examined with the following results:

CASE 1. Miss W., 28. For eight years asthma more or less constant throughout year, increased markedly by the neighborhood of horses. Has been under observation for six years. A large cystic right middle turbinate was removed in 1909, without influence on asthma. Tonsils were removed for septic detritus four years ago. During past two years, asthma had been much less troublesome, and is able to drive behind horses, although the air of a stable excites an attack.

A drop of diphtheria antitoxin was placed in each nostril. Within five minutes the mucous membrane of both lower turbinates and of the septum became pale, edematous and covered with serous fluid. The clinical picture was that of typical hay fever, and the symptoms passed off in the course of two hours. A week later a scratch was made in the skin of the lobe of one ear, and the same antitoxin applied. In three minutes the patient stated that the ear itched, and examination showed a white, slightly raised area of the skin immediately surrounding the scratch, while the skin beyond this white area showed reddening and general swelling, the lobe of the ear as a whole being about twice the thickness of the other. Five minutes later the white wheal had disappeared, and the surface of the skin was diffusely reddened. In the course of the next hour the edema of the lobe began to diminish and two hours later had disappeared.

CASE 2. Mrs. V. Seen first in 1906 for asthma of many years' duration. Had had much treatment of nose without effect. In intervals of the attacks, chest examination was negative. Has had one or two small dogs continually about her. For several years following the first examination, it was observed that on being away from the dogs, she was free from asthma, and an attempt was made to have her dispose of the animals, but without success. In November, five years ago, she was given pollantin by her family physician for an attack of sneezing and moderate asthma. This was immediately followed by exceedingly severe dyspnea, nasal ob-

struction, and profuse watery flow from the nose, being the worst attack that she had ever experienced. The symptoms subsided in the course of twelve hours. Two years ago both dogs were disposed of on account of old age, and the patient has since then had no dogs in the house. During this period she has been entirely free from asthma, although a sense of constriction in the chest is experienced when in the neighborhood of horses. When I explained the test which I wished to make, the patient was unwilling to have the antitoxin applied to the nose, as her recollection of the asthma following pollantin was so disagreeable, but consented to have the test made on the ear. Within two minutes after the application of antitoxin to the scratch on the lobe of the ear, a clearly defined, elevated, white area appeared, bordering the scratch, surrounded by a diffuse reddening, the whole lobe becoming symmetrically swollen, this resembling perfectly the appearance on the skin which would be produced by a nettle. Five minutes later the white area became changed to red as in Case 1, and the local manifestations cleared up slowly in two hours.

CASE 3. Miss J., 24. Seen in 1909 for recurrent colds and asthmatic attacks since three years of age, always excited by horses, although also occurring at all times in the year, often without assignable cause. Bilateral ethmoiditis existed, characterized by enlargement of the middle turbinates, and polypoid degeneration of the mucous membrane. In 1910 the ethmoid cells were curetted, and the patient experienced complete relief for a period of ten months, when slight shortness of breath developed. One year later, in November, asthma appeared following a cold, and a return of polpoid tissue was observed in the right ethmoid region. This was curetted with relief from the asthma. In March of this year, the patient was tested by the methods above described, with positive result, one drop of the antitoxin in the right nostril causing a typical vasomotor swelling and pallor of the mucous membrane, completely obstructing respiration on that side, and attended by profuse watery discharge, the other side remaining unaffected. The right eye became suffused with free lachrymation. The skin test of the ear developed in four minutes as a clearly defined anemic area of one-fourth inch in width bordering the incision, and contrasting sharply with the hyperemic neighborhood. The whiteness of this area was especially well-defined against the generally reddened lobe, fading in four minutes, leaving a generally reddened edematous lobe, which returned to normal in three hours.

CASE 4. G. T., male, 24. Seen in February of this year for acute ethmoiditis, which cleared up after ten days. There was an old right chronic ethmoiditis with polyp formation. Polypi had been removed in the past on several occasions. The patient stated that during the summer the neighborhood of horses would occasion sneezing, and what he described as asthmatic feelings. This condition was apparently not sufficient to cause much discomfort. The serum test in the nose gave a delayed reaction, occurring in about half an hour, and lasting for two hours later. The serum test on the skin gave negative results.

CASE 5. Miss G., 24. Seen last summer for nasal obstruction and vasomotor rhinitis, aggravated in the neighborhood of horses. During the following winter she was seen on three occasions for nasopharyngeal catarrh, and stated that she was at this season able to go near horses without symptoms. A serum test of the nose gave no reaction.

CASE 6. Miss C. Seen May, 1913, for perennial vasomotor rhinitis, increased by the neighborhood of horses in summer. No asthma. During the winter is able to come near horses without symptoms. The serum test in the nose gave negative results. The skin test was not applied.

CASE 7. J., male, 23, brother of Case 3. In general well. Sneezed since boyhood whenever is in the neighborhood of horses. No asthmatic symptoms. Submucous resection has been done by another physician one year ago. Except for small septal perforation, nose essentially negative. Introduction of antitoxin into nostril not followed by reaction Skin test on ear negative.

CASE 8. E., male, 60. Hay fever many years. Horses excite sneezing and watery nasal discharge, but no asthmatic symptoms. Chronic non-suppurative ethmoiditis and polypi. The serum test of the nose was negative. On the skin a delayed reaction occurred, beginning in forty minutes, and lasting two hours.

Five cases of bronchial asthma which gave no history of irritation from horses were examined by the nasal test with negative results. Five cases of uncomplicated hay fever received the serum in the nose without exciting reaction.

SUMMARY OF CASES.

In three cases of horse asthma the application of horse serum to the nasal mucous membrane, (in one case pollantin) or to a cut of the skin gave rise to an immediate reproduction in miniature of the phenomena of anaphylactic shock, namely spasm of the arterioles, with oedema and surrounding congestion.

One case of horse fever gave a delayed but otherwise typical skin reaction, but no disturbance in the nose. One case of horse fever gave a delayed reaction to the nasal test, but was negative for the skin test. Four of the horse fever cases without asthma were negative for both tests. Five cases of bronchial asthma and five cases of hay fever without sensitiveness to horses gave negative results.

The number of cases thus far tested is too small to justify definite conclusions in regard to the value of these tests in detecting the existence of a state of sensitization to horse serum, but if further studies should confirm them, they should prove to be of assistance to the physician who is in doubt whether in a given case it is safe to administer antitoxin.

So far as they go, they would indicate that in horse asthma, an anaphylactic reaction may occur after the administration of horse serum; in horse fever with nasal symptoms alone, this danger is less or not at all to be feared, and in other types of asthma and of vasomotor rhinitis it is not present.

Clinical Department.

BILATERAL SARCOMA OF UNDESCENDED TESTES.*

By Oliver C. Smith, M.D., Hartford, Conn.,

Surgeon to the Hartford Hospital.

When some weeks ago the author looked through the literature on malignant diseases occurring in the undescended testicle he was surprised at the paucity of the same. Shortly after a splendid article with a thorough review of the literature on the subject appeared in the December number, Vol. 17, of *Surgery, Gynecology and Obstetrics*, by Dr. Kenneth Bulkley of New York City. Fifty-seven cases of malignant degeneration of the undescended abdominal testicle were found on record, to which he added two, making 59 cases, after an exhaustive search of foreign and domestic literature. Sarcoma of one type or another occurred in 40 of these 59 cases. Of this number the side was reported in 56 instances; 30 were upon the right, 24 were upon the left, and two were bilateral.

Since this article appeared the author has made a further search of the literature, believing that other *bilateral* cases must have been reported, as in Dr. Bulkley's collection cases of intra-abdominal testes only are cited. In a careful search, however, including a perusal of the catalogue of the Surgeon-General's library, no other cases of bilateral malignancy of testicles were found. The rarity of the condition would seem to make it proper to report the following case of bilateral sarcoma of undescended testicles.

H. M., aged 38, native of United States, farmer, white, married, no children; referred by Dr. R. E. Harrington, Stonington, Conn.

Family History. Father died of heart disease; mother living, has general dropsy; one sister living and well. No tuberculosis or malignant disease in family.

Personal History. Patient has never been seriously ill and enjoyed good health until onset of present trouble. As a child both testes were absent from the scrotum; occasionally the left one could be felt in the canal. At thirty years of age he suffered from parotitis, complicated by painful swellings in the inguinal canals. These swellings entirely subsided, and not until two months prior to our observation of him, did he notice an enlargement in each inguinal canal, the right being the larger. Their growth was rapid, the one upon the right side occasioning some pain.

Condition at Time of Examination. July 8, 1913. A tall, sinewy, bronzed, thin man of quiet demeanor, rather slow of comprehension, with masculine traits not well marked. Heart sounds were normal; lungs clear and resonant; reflexes active; no palpably enlarged glands. Blood-pressure, 120 mm. hg; hemoglobin, 80%. The prostate and seminal vesicles were normal to palpation, and the urine was negative. Both iliac fossae and inguinal canals were occupied by large, fluctuant tumors, the right extending from the upper margin of the scrotum to above the umbilical line. This mass was tense, fluctuating, and bulging far anteriorly to the abdominal wall. The tumor upon the left side occupied the inguinal canal and was less tense, and through the fluid medium could be palpated a solid, ovoid mass at the upper posterior area. Both testes were absent from the scrotum.

Diagnosis. Bilateral hydrocele with neoplastic degeneration of both testes high in the inguinal canals.

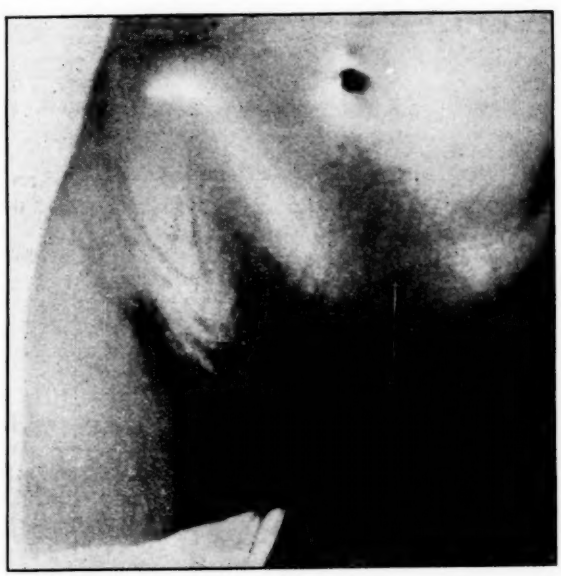

Fig. 1.
Photograph of patient taken previous to operation.

Figure 1 is a photograph of patient taken previous to operation. Operation July 10, 1913, at Hartford Hospital, under ether anesthesia, drop method.

An oblique incision was made on the right side, parallel to Poupart's ligament over the center of the tumor; the external oblique fascia was split as in operation for hernia. An enormous fusiform cyst of the tunica-vaginalis was found containing 750 c.c. of clear straw-colored fluid. At the upper portion a hard, irregular mass, the neoplastic testicle was found. The tissues of the cord, including the vessels and lymphatics, were dissected beyond the internal ring; the vas deferens was followed as far down as possible toward the pelvis and removed. A similar operation was performed upon the left side, where the quantity of fluid was found to be half that of the right. The testicular tumor was found lower in the canal than upon the right side, of similar appearance and but slightly varying dimensions. The wounds were closed without drainage. The operation was followed by but little reaction, and primary union resulted.

Figures 2 and 3 are photographs of the testicles after removal, actual size.

* Read before the Surgical Section of the Hartford Medical Society, December 23, 1913.

FIG. 2.
Photograph of left testicle after removal, actual size.

FIG. 3.
Photograph of right testicle after removal, actual size.

Figure 4 is a photograph of the patient taken seven months later, showing extensive recurrence on the right side.

The pathological report by Dr. John Carter Rowley, pathologist at the Hartford Hospital, was "large, round-celled sarcoma of each organ."

Figures 5 and 6 are photomicrographs by Dr. Arthur J. Wolff and show very clearly the histological structure.

The following is Dr. Wolff's description of the sections: "The sections were stained with a modified Van Gieson stain. The histological structure of both pieces of tissue are entirely similar, so that a description of the one applies to both. They consist of large, round cells imbedded in a scanty amount of intercellular substance; the stroma intervenes between all the cells and is closely connected with them. The sections show a rich but a very irregular distribution of small blood vessels possessing but a single layer of endothelial cells separating these from the round cells forming the tumor.

As can be seen in the photomicrograph of the right testicular growth, the large, round cells are in very marked mitotic action. In some parts of the tumor, especially near the peripheral zone, some disposition to alveolar structure is to be seen, but such arrangement is entirely absent in the deeper portions of the mass. The histological diagnosis is "large round cell sarcoma."

From the statistics collected by Dr. Bulkley it appears that malignant disease of the testicle is fifteen times as frequent in the undescended as in the scrotal testicle. It is obviously important, therefore, to place the undescended testicle in the scrotum during childhood, either by manipulation and massage, or by operation. Where this cannot be accomplished, removal of the undescended testis should be considered.

FIG. 4.
Photograph of patient taken seven months after operation, showing extensive recurrence on right side.

The newly built Institute of the History of Medicine will be opened in the University of Vienna at the beginning of the summer semester. Already the institute has a library of three thousand volumes, besides a number of valuable manuscripts relating to the Vienna Medical School. There is also a collection of old surgical instruments and apparatus.—*British Medical Journal.*

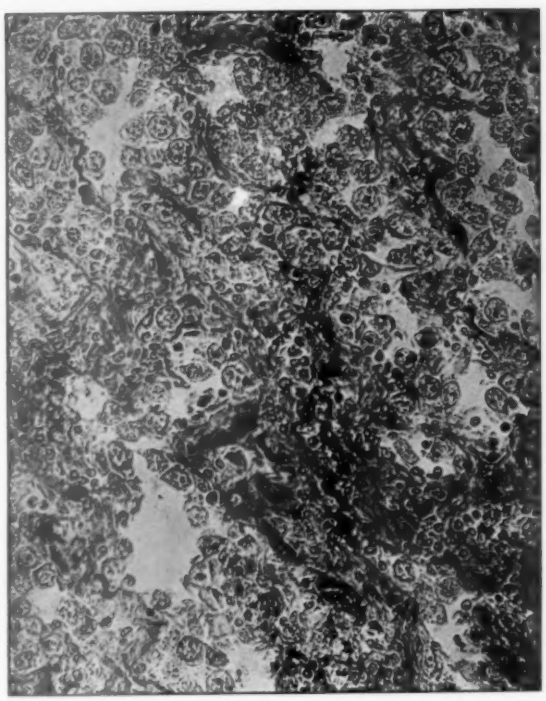

FIG. 5.

Testicle, large round cell sarcoma (right). X 545 Winkel 7 mm. obj. No. 3 Winkel proj. eye piece.

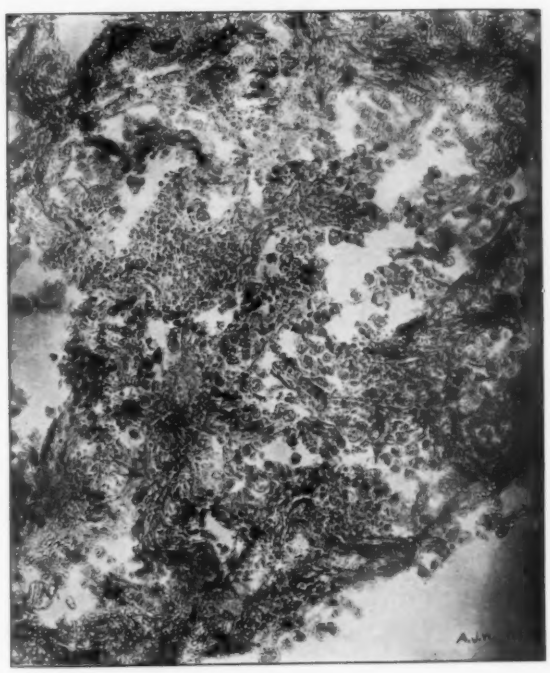

FIG. 6.

Testicle, large round cell sarcoma (left). X 240 Winkel 7 mm. obj. and No. 1 proj. eye piece. Modified Van Giesen stain.

Reports of Societies.

NEW ENGLAND PEDIATRIC SOCIETY.

The thirty-first meeting of the New England Pediatric Society was held on March 20, 1914, at 8.15 p. m., at the Boston Medical Library.

Fritz B. Talbot, M.D., Secretary.

Dr. A. W. Fairbanks showed two cases of

CHONDRODYSTROPHIC DWARFS (BROTHERS).

Dr. Fairbanks, in commenting on the two chondrodystrophic dwarfs shown, said that such cases were entirely unrelated to hypothyroidism. He had seen a number of cases in children and three in adults and they were all free from myxoedematous phenomena and were normal mentally. One of the cases seen originally in childhood has been under observation nearly twenty years. These two brothers are mentally normal for their age and are doing the usual school work for that age. All of the other children and both parents are of normal stature. The mother and sister were shown for comparison.

The mother's pregnancy with both of these boys was normal in every respect.

Photographs of other cases in children were shown, as well as radiographs of cranium, extremities and thorax of each of the brothers.

The condition is due to defective growth of cartilage, the normal development of which should take place, or at least commence, between the third and the sixth month of fetal life, and to premature ossification of this deficiently developed cartilage, with consequent defect in the subsequent development of the bones. Only those bones are involved that develop from cartilage, and only those the cartilage of which should be in active growth in those particular months of fetal life, namely, the endochondrium of the long bones of the extremities, and the cartilage from which are formed the bones of the cranial base, the ribs and the pelvis. The limitation of the disturbance to this particular period of fetal life, and to the structures of the prospective bony framework whose development should normally commence in this period, but does not, accounts for the characteristic deformity seen in this condition, of which these two children are most typical examples.

The particular interest of these cases shown this evening lies in the fact that we have here two very characteristic cases of the condition in two children of a family all of the other members of which are normal.

It has been reported that a chondrodystrophic mother has given birth to a chondrodystrophic child. On the other hand, a chondrodystrophic mother has given birth to normal children.

It would seem more probable that we have to do in these cases with an intrinsic germinal defect rather than with an acquired embryonic condition or disease. Certainly the condition has nothing to do with rhachitis, for the pathological process is entirely different in the latter disease, and the term "fetal rickets" should not longer be employed as synonymous for its condition.

DISCUSSION.

Dr. Walter B. Swift: I saw these cases in the Boston City Hospital, nerve out-patient department, and it may be of interest to know that they were put on thyroid extract there without any results whatever. This was done with Dr. Fairbanks' prophecy that no change would come. In looking over the German literature I find there are some cases, two in brothers, that have been reported: Porter, 1907, three brothers, and Schemensky, 1912, two brothers, twins.

Dr. Edwin T. Wyman read a paper on,

PYELITIS IN INFANCY AND CHILDHOOD.*

Abstract: A review of the symptomatology, diagnosis, prognosis and the treatment of pyelitis.

He states that these cases of pyelitis are not infrequently treated for other diseases and reports two typical cases where the diagnosis was overlooked.

He states that in a series of cases of pyelitis in infants and children at the Children's Hospital, Boston, 54% were in infants under two years of age and 40% over two years. Of these cases 63% of the infants were females and 90% of the children were females. Vomiting was noted in 35% of the cases, painful micturition in 36%, and frequency of micturition in 40%. Chills were noted in 15%, and abdominal pain in 16% of the cases.

The average leucocyte count in the uncomplicated cases was 19,000; the lowest leucocyte count was 8,000, in a chronic case, and the highest leucocyte count was 62,000, in a very acute case. The temperature varied from normal in the chronic cases to 105.5° F. in the acute cases. There was anorexia, anemia, fretfulness and loss of weight in all cases.

DISCUSSION.

Dr. Myron L. King: I would like to ask Dr. Wyman what proportion of the cases clear up entirely? Do they entirely clear up, or do they run for years and years?

Dr. Edwin P. Stickney: One thing that surprised me was the size of the dose of these different drugs, and *especially* the citrate of potash. Do such large doses upset the stomach? In these cases I never use such large doses, and I wonder if the other gentlemen are accustomed to give them? I am asking these questions for information, not criticism. I have seen a number of these cases, and all have been in girls. In one case I feared we might have some tubercular trouble and had Dr. Ernst go over the case carefully. He found the colon bacillus and there was no tubercular infection whatever. I have seen cases extend over two years' time where the colon bacillus was present.

Dr. Wyman, in closing: As to the transparietal theory, I cannot answer that question. I think that in a number of cases the condition clears up entirely. In some of the more acute cases the condition clears up in a month or six weeks. The chronic cases do not clear up as easily, and one often finds them extending over a year or sometimes years in spite of careful treatment.

With the alkaline treatment I give enough to get a strong alkaline reaction in the urine. (If I do not get it with grains ten, three times daily, of the ci-

* See Boston Med. and Surg. Jour., Vol. clxx, No. 14, April 2, 1914, p. 540.

trate of potassium, the dose is increased to twenty grains three times daily. With the hexamethylenamin, I push the dose until I get the test for formaldehyde in the urine, keeping the urine acid all the time, and then if there is any microscopic blood in the urine, you know that there is irritation of the kidney, when the treatment is discontinued. With regard to citrate of potassium disturbing the digestion, in my experience I have not found it to do so.

DR. Z. B. ADAMS read a paper on,

THE ANOMALIES OF THE LUMBO-SACRAL REGIONS AND THEIR RELATIONS TO THE CAUSE OF SCOLIOSIS.*

ABSTRACT: First is mentioned the fact that congenital lesions of the base of the spine are frequent occurrences in scoliotics, more frequent than has been previously supposed; then follows a description of the mechanics of the base of the normal spine; the joint between the fifth lumbar vertebra and the top of the sacrum and between the sacral segments; the various anomalies at this region are rehearsed, special attention being drawn to those which have a bearing on the causes of scoliosis; next is a chapter on the mechanics of the scoliotic spine, but especially of the base, in scoliosis; next diagnosis is treated and the frequency of these lesions is brought out in an analysis of twenty-six cases, a brief description of the x-rays taken in making the diagnosis. In speaking of treatment the importance of these anomalies is shown, and it is brought out that it is a mistake to attempt to make the corrected spine stand upon the twisted and uneven base, from which it has toppled; therefore it is necessary to place and fix the base of the spine in a position of equilibrium, so that the corrected spine may stand upon it. This requires careful surgical treatment after corrective methods have been practised.

DISCUSSION.

DR. TALBOT: We have had the privilege tonight of hearing some entirely new principles in the mechanics of scoliosis, and I am told that these principles which Dr. Adams has worked out are going to revolutionize the treatment of that condition.

DR. RICHARD M. SMITH read a paper on,

FAMILY INCIDENCE OF ENDOCARDITIS IN CHILDREN.

ABSTRACT: Out of 208 cases of endocarditis, chorea or rheumatic fever 30, or 14.48%, occurred in children who had father or mother or brother or sister with a similar infection.

Some families had all the children showing infection. In some cases the date of the onset of symptoms of the different members of the same family suggested strongly infection from one individual to another.

DISCUSSION.

DR. HENRY I. BOWDITCH: I would like to ask Dr. Smith whether there was any similarity between the infections, what proportion of the cases in a given family had chorea, and what proportion had rheumatism, and whether they all followed a certain course. I think this study is extremely interesting, and opens our eyes still further to the possibilities of infections. We may have to come to the point of isolating such families because of the transmission of dangerous organisms.

DR. L. C. MILLER: Dr. Smith stated in his remarks that the social worker looked up these cases. I would like to ask him if she reported on the surroundings, hygienic conditions, etc., and how much bearing they may have had on the course of these conditions in different members of the same family.

DR. ARTHUR W. FAIRBANKS: In those cases of endocarditis that result from tonsillitis it seems to me that there can be no question of familial incidence in the strict sense of the term, that is, a familial predisposition to the disease. There can be no question about the infectious and contagious nature of acute tonsillitis. We have all of us seen many examples of this in families and in institutions. Now if such infections result in endocarditis, that endocarditis cannot be considered as indicative of familial incidence, but is better termed a familial accident. It is the result of infection transmitted from one individual to another by contact, as in the case of any other infection.

We of course see cases of rheumatism with endocarditis, and chorea with cardiac involvement occurring in more than one member of a family without any obvious infectious disease like tonsillitis having preceded their onset. Whether the entrance of the infection in cases is by some other route than by the tonsils we cannot say, but the resultant endocarditis is the accidental result of infection rather than the result of familial predisposition.

DR. SMITH, in closing: I would say in reply to Dr. Bowditch's question as to whether one family was more prone to have rheumatism, another chorea, and so on, that we did not find that this was so. There may be three children in the same family, and one of them may have chorea and rheumatism, while the other two have other conditions,—they do not necessarily have the same condition.

Answering Dr. Miller as to the question of surroundings, we tried when we started out to go into the question of surroundings, physical conditions, etc., but we were unable to get sufficient data from which to draw accurate conclusions. Cases of endocarditis following tonsillitis do not fall into the group under discussion, and there are a great many such cases.

Another illustration of this possible infection of rheumatic fever from one member of the family to another may be worth mentioning. A case came to my attention today where two boys had been in the habit of sleeping in the same bed. One fell sick and the brother was taken away to sleep in another room. The first boy proved to have rheumatic fever and for four or five days he slept alone. When the joints quieted down, the other boy resumed sleeping with him, and the next day he came down with rheumatc fever. This may be a pure coincidence, but it seemed to me a rather striking occurrence.

* See BOSTON MED. AND SURG. JOUR., Vol. clxx, No. 21, May 21, 1914, p. 786.

PLAGUE IN COLOMBIA.—Report from Bogota on May 7 states that bubonic plague has broken out along the Atlantic coast of Colombia. Suppressive measures have been immediately instituted. The number of cases is not given.

Book Reviews.

Diagnosis in the Office and at the Bedside. The Use of Symptoms and Physical Signs in the Diagnosis of Diseases. By Hobart Amory Hare, M.D. New (7th) edition, thoroughly revised and rewritten. Octavo, 547 pages. Philadelphia and New York: Lea and Febiger. 1914.

Dr. Hare has revised his book, which is now in its seventh edition. He has omitted laboratory methods from the text. A very careful index is an excellent feature.

Diseases and Deformities of the Foot. By John Joseph Nutt, B.L., M.D., surgeon-in-chief to the New York State Hospital for the Care of Crippled and Deformed Children. New York: E. B. Treat and Company, 241-3 West 23rd Street. 1913.

This monograph, designed to cover all the common disorders of the feet, in large measure accomplishes its purpose. If there is a slight lack of an original point of view, the thoroughness with which the foot conditions of all sorts are described makes it a very useful book. It is evidently written rather more for general practitioners than for orthopedic surgeons, and wisely it does not attempt to describe the details of complicated operative procedures. The illustrations, especially the line drawings, are profuse and graphic, those which portray the commoner types of deformity of poliomyelitis being most excellent. The book will help to call attention to a region which suffers much from medical ignorance and inefficiency.

Die Krankheiten der Nase und Mundhöhle, sowie des Rachens und des Kehlkopfes. Ein Lehrbuch für Arzte und Studierende. Von Dr. Alfred Bruck, Berlin. Zweite, wesentlich vermehrte und verbesserte Auflage. Mit 252, zum Teil farbigen Abbildungen und 2 Tafeln. Urban and Schwarzenberg. 1912. New York: Rebman and Company.

This is the second edition of an excellent text-book. With German thoroughness and system it divides and subdivides, but it is condensed and clear. It has a little to say about everything and not too much about anything. To the American reader the method of dealing with the tonsils will appear ancient, but on the other hand, he will find some subjects which he has probably never heard of before. The first edition of this book was translated into English four years ago by Dr. Ross of Edinburgh and published in this country. It is reviewed in this Journal, Vol. 163, p. 262.

Chronic Colitis. Its Causation, Diagnosis and Treatment. By George Herschell, M.D., and Adolphe Abrahams, M.D. London: Longmans, Green and Company. 1914.

The authors state that they have designed this book for the general practitioner. In their definition of chronic colitis they exclude the condition of ulceration of the intestine except in so far as it is definitely considered a complication of chronic colitis. They regard ulcerative colitis as a specific infective condition which is the province of the surgeon. Most readers will wish a work that is less elementary and more critical. On the whole, the work is rather vague and general.

A Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., professor of physiology, Johns Hopkins University, Baltimore. Fifth edition, thoroughly revised. Octavo of 1020 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1913.

In the new edition of this well-known text-book the author has maintained admirably the high standard set by previous editions. While the frequent issuance of new editions of necessary text-books is to be deplored in general, it seems to be unavoidable in any field in which advance is so rapid as in the medical sciences. An unfortunate feature of the situation is that in the most rapidly developing phases of a subject, material advance may be made during the interval between preparation of the manuscript and issuance of the text-book. This is exemplified in interesting fashion in the discussion in Professor Howell's book of internal secretions. His treatment of the functions of epinephrin represents the utmost that could be said in the summer of 1913. But in the months that have elapsed since then, some very striking advances have been made in our understanding of the operation of this hormone. Thus nothing is said in the text-book about the "emergency function" of epinephrin, although in the light of the most recent researches that expression seems to elucidate its actual use in the body better than the more detailed statements previously given.

Probably the most significant advance in the present edition over previous ones, lies in the sections devoted to the absorption of the various food stuffs, and to general metabolism. The recent work of Mendel and Osborne, Folin and Denis, and the other workers in these fields, is

presented with full appreciation of the great gain in our comprehension of these difficult topics which their work has furnished. Scattered throughout the book are to be found such changes in statement as the general physiological advance of the last two years has made necessary. While one might possibly wish that the recent studies having to do with the mechanism of muscular contraction had received more attention, in view of the great complexity of this subject and the lack of finality about the experiments, the postponement of the discussion to later editions is undoubtedly justified. That the book as a whole constitutes one of the most satisfactory presentations of the subject matter of physiology in any language, cannot be doubted.

The Early Diagnosis of Tubercle. By CLYDE RIVIÈRE. New York: Oxford University Press. 1914.

Any new book by such an authority as Dr. Rivière merits close attention and scrutiny. The present volume is a small one of nearly pocket size with, however, 260 pages.

The reviewer frankly does not like the title. While the author evidently means the early diagnosis of pulmonary tuberculosis, certainly the title does not convey this idea. As is common with many books of this type, it loses much of its value as a help to general practitioners in this important branch of medicine on account of the multiplicity of detail. The description of fine technical points in diagnosis would tend to diminish the relative importance of the fundamental groundwork on which the early diagnosis of pulmonary tuberculosis rests. For the specialist in tuberculosis and diseases of the lungs there are many points of interest, although many with which American students of tuberculosis would not for a minute agree. The reviewer is strongly of the opinion that there is not anywhere near enough attention given to the history, occupation and constitutional signs and symptoms of the patient and far too much space devoted to the detailed examination of the lungs. The author is an enthusiastic advocate of percussion as a means of diagnosis, and in the reviewer's opinion somewhat exaggerates its value and does not pay enough attention to auscultation.

Under the subject of differential diagnosis, he speaks of apical pulmonary collapse and acute apical catarrh, chronic bronchitis with collapse, as simulating early pulmonary tuberculosis. The cases which he presents as examples of this condition unfortunately do not give enough data to allow of an opinion one way or the other. It would be far safer to consider the cases which he presents as ones of early pulmonary tuberculosis rather than of pulmonary collapse or apical catarrh.

There is a detailed discussion of tuberculin in diagnosis, far too detailed for the general practitioner to understand or to be even interested in. The best feature of the book is a detailed discussion of tuberculosis of thoracic glands, or hilus tuberculosis. This is most interesting and valuable and presents this subject in fuller detail than the reviewer has seen elsewhere in any other book or publication. There are many photographs, diagrams and charts.

With the exceptions mentioned above, there is very much to commend itself in this little volume, although it is one evidently intended more for specialists than for the average general practitioner.

Scrofulosis. By PROFESSOR DR. G. CORNET, Berlin. Translated from the second German edition by J. E. BULLOCK, M.D., London. New York: William Wood and Company. 1914.

After a careful study of this book, the reviewer is as much at a loss after having read it as he was before so doing as to what scrofulosis is, and as to its relation to pulmonary tuberculosis. In general, there seem to be two causes of this strange condition: (1) scrofulosis due to the tubercle bacillus; and (2) scrofulosis due to various pyogenic organisms. In reading over the various conditions due to scrofulosis, one finds that the seborrhea of the scalp in young infants, and large tonsils and adenoids in childhood, eczema in all of its forms in all ages, glands of the neck, all forms of tuberculosis, and all diseases due to pus-forming organisms, are due to scrofulosis or to the scrofulous diathesis. The reviewer regrets that he cannot see how this book can cause anything but confusion worse confounded, and utterly fails to see its place in the medical literature of this country at least. The therapeutic advice here given would seem to hark back to a period of twenty-five years ago. Creosote, in various ingenious mixtures, arsenic, cinnamic acid, sapoviridis, and others are recommended. The author even devotes half a page to the rubbing in of brown soft soap from the neck to the popliteal space as a cure for tuberculosis, glandular swellings, ulcers, etc.

Although in certain passages there is much sound advice in this book, as a whole the reviewer believes that such a volume as this will do far more harm than good.

The Junior Nurse. By CHARLOTTE A. BROWN, R.N. Illustrated. Philadelphia and New York: Lea and Febiger. 1914.

This volume is primarily a text-book for probationers. It describes the things a nurse should know and learn to do early in her training. It is a well-written book, illustrated with 41 good figures in the text, and should find a place of definite value in the library of training-schools and of the individual pupil nurse.

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TRANSMUTATION AND RACE-BUILDING AMONG BACTERIA.

It has been recognized in the past that there may be considerable variation and transformation in the biological characteristics of different bacterial species. Progress in this direction has been carried forward to such an extent that we are now confronted with evidence that transmutation of one species of bacteria to another has been accomplished, thus questioning the permanence of bacterial species.

These transformations or transmutations of bacteria have been brought about by modification of the environmental conditions through experimentation. We find that Thiele and Embleton[1] report the experimental transformation of Bacillus mycoides into an organism resembling the bacillus anthracis. The former bacterium is a non-pathogenic organism found in garden soil, slender, non-capsulated, flagellated, motile, growing at a low temperature, and dying when incubated at body temperature. The latter organism is pathogenic, shorter and thicker, encapsulated, non-flagellated, non-motile, capable of growing at body temperature, virulent, having all the properties of the bacillus anthracis and producing lesions quite similar to those found in anthrax. In like manner these authors have converted the harmless smegma bacillus into a virulent bacillus which resembled the tubercle bacillus in all its properties, and the various relatively avirulent diphtheroid bacilli have been transformed to virulent organisms which in every way resembled the diphtheria bacillus.

Rosenow,[2] of Chicago, has recently made noteworthy and valuable contributions to this fascinating and important problem of the transmutation of bacterial species. In his recent paper in the *Journal of Infectious Diseases*, he first refers to the work of investigators in the problem of the transformations among the various strains or types of streptococci, and then gives the results of his own extensive experimentation and observation. Five different micro-organisms were employed in these experiments. They were the streptococcus viridans, the streptococcus hemolyticus, the streptococcus mucosus, the streptococcus rheumaticus and the pneumococcus.

The extent of his observations can be judged from the fact that they comprised the following: Culturing of the micro-organism under varying favorable and unfavorable conditions, with a study of the morphologic biochemical and virulent properties of the various strains of cocci employed. The organisms were cultivated in various and widely different environmental conditions, such as, for instance, cultivation in an atmosphere varying from pure oxygen to complete absence of oxygen, in media with a salt concentration varying from hypertonic to hypotonic, at temperatures slightly above and slightly below normal body temperature. Various body fluids, such as ascitic fluid, urine, sterile milk and others, were employed. Furthermore, the various micro-organisms enumerated above were grown in symbiosis with other organisms, within the cavities and circulating blood of living animals. Still further, the organisms used in this extensive series of experiments were obtained or isolated from a great many widely different sources, including tonsillitis, arthritis, erysipelas, puerperal sepsis, pneumonia and others. The bacteria so obtained were subjected to the various experimental environmental conditions mentioned above.

As a consequence of this work Rosenow found the following results: Apparently complete transmutation of each of the various members

[1] *Ztschr. f. Immunitätsforsch. u. exper. Therap.*, 1913, xix, 643.

[2] Transmutations within the Streptococcus-Pneumococcus Group, *Journal of Infectious Diseases*, 1914, xiv, 1. Also Relation of and the Lesions Produced by the Various Forms of Streptococci with Special Reference to Arthritis, *Illinois Medical Journal*, xxv, 1, 11; Rôle of the Streptococcus in Rheumatism, Muscular and Articular, *Journal of Infectious Diseases*, January, 1914.

of the streptococcus-pneumococcus group to one or the other of the rest of the group was accomplished *in vitro*. So complete was the transformation in some of the strains that it was found to be so by every test known. Thus the transmutation into another type of organism and the identity of the latter was proved by the morphologic and biochemical characteristics, the fermentative powers, presence or absence of capsule, solubility or insolubility in bile and sodium chloride solutions, the behavior toward the respective broth culture filtrates (Marmorek's test), and the specific immunity response as proved by the production of specific opsonins and agglutinins, and the more or less specific pathogenic powers as evidenced in the ability to produce characteristic lesions when inoculated into animals. For example, strains corresponding to hemolytic streptococci were converted into typical pneumococci as determined by all the tests enumerated and vice versa. In other words, the streptococcus was transformed from one strain to another and to a pneumococcus and vice versa, as proved by morphologic, cultural, agglutinating, pathogenic and other properties.

It has thus apparently been demonstrated that one species or race of bacteria can be transformed or transmuted into another. A new species of bacteria, a new race of micro-organisms has been developed by the modification of certain environmental conditions. Rosenow further noted that the various strains with which he experimented seemed to have a more or less specific affinity for certain specific structures in the body, one attacking the joints with the production of arthritis, another the lining of the heart with resulting endocarditis, another the muscles, producing myositis.

As Rosenow points out, this work was started by others before him and no doubt anticipated by still others before them, since it was fully appreciated that differentiation and specialization of function was here at its minimum, in as much as in dealing with bacteria we have to do with the very lowest forms of life.

The importance of these findings for bacteriology, epidemiology, medicine and biology, are not yet fully appreciated by many. But Rosenow ventures to say that the fact that variations in oxygen tensions and salt concentrations, that growth in symbiosis with other bacteria and that injections into body-cavities in animals, commonly produced mutational forms in streptococci, suggests strongly that similar changes might occur in various foci of infection where such conditions may prevail. "It would seem, therefore," he declares, "that focal infections are no longer to be looked upon as merely a place of entrance of bacteria but as a place where conditions are favorable for them to acquire the properties which give them a wide range of affinities for various structures."

MEDICAL LEGISLATION. REORGANIZATION OF THE STATE BOARD OF HEALTH.

THE bill for reorganization of the Massachusetts state board of health, the text of which was printed in full in last week's issue of the JOURNAL, has been first referred by the legislature to the committee on ways and means. On Tuesday, May 19, this committee held a hearing at which Governor Walsh spoke in favor of the bill. Others who spoke in its favor were Dr. Bowers, in behalf of the legislative committee of the Massachusetts Medical Society, Mr. Stoughton Bell, for the Boston Chamber of Commerce, and Drs. Edward O. Otis, James J. Minot, and Arthur K. Stone. Many amendments were offered. It is estimated that the expenses of administering the new system would be about $16,000 more than the cost of the present board.

Opponents of the bill criticise it because it does not transfer the department of vital statistics from the secretary of state to the health service, and because it makes no provision for adequate control of the milk supply. It is a debatable question whether such provisions should be made a part of the present bill; whether they could not more properly be made the subject of special legislation. It is also suggested that the health commissioner should be given even larger jurisdiction and authority. This, too, is a legitimate question for discussion in committee and before the legislature. As it stands, we believe the bill a constructive and dignified piece of legislation, and, with such modifications as may seem desirable, advocate its enactment into law.

It is to be realized that Dr. Walcott's retirement marks the end of an epoch in health administration; and that methods which were efficient with the board of his time, may no longer be adequate under the changing conditions and personnel of the future.

HEALTH EDUCATION.

It is evident that increasing publicity in regard to matters of health is to be the prevailing attitude of the future. If this is accepted it is eminently desirable that such instruction as is given in physical and mental hygiene should be from authoritative sources. Among such efforts toward public enlightenment we are glad to call attention to a series of small pamphlets which sell at the modest price of four to ten cents bearing the general title, Health Education Series. These small booklets, as they are termed in the prospectus already number 29, on such subjects as "Milk," "Colds," "Meat and Drink," "The Boy and the Cigarette," "Microbes, Good and Bad," "Emergencies,' "Industrial Hygiene" and others of like character. These are written by such authorities in their several subjects as the late Dr. Charles Harrington, Miss Ellen H. Richards, Professor C.-E. A. Winslow, Dr. Edward O. Otis and other persons of equal attainment in their special fields. Undoubtedly such pamphlets, obtainable at so small a price, will be helpful to a large number of people. Evidently the writers have been chosen with care to the end that the suggestions made shall lead directly to a more adequate knowledge of the laws of health through a plain statement of the means for their attainment. We wish to call special attention to the latest of the series by Dr. Charles M. Green on the subject "Prospective Motherhood," a subject upon which it will be generally acknowledged a large amount of ignorance exists. Dr. Green has approached his topic on the basis of a wide experience in a way which cannot fail to be of value to women looking forward to motherhood. If the precepts therein expressed were generally followed there is no doubt that much discomfort and actual illness both before and after childbirth might be avoided.

HOSPITAL PROVISION FOR WHOOPING-COUGH.

There is at present pending before the Massachusetts General Court a bill for the abolition of the parental school at West Roxbury. The school department, it is understood, already has in hand plans of making other provision for the children annually committed there. If this bill is passed, it is proposed to convert the buildings of the parental school into a hospital for whooping-cough. At present there is no hospital provision for cases of pertussis, which are never admitted to the South Department of the Boston City Hospital. During the decade from 1901 to 1911 the annual average of deaths from this disease was 76 per 10,000 inhabitants. In 1910 the rate was only 52 but in 1913 it rose to 97.

Whooping-cough, though unfortunately often lightly regarded by the public, is an important disease of childhood, serious in its course, complications, and sequelae. It has a considerable mortality, often due to neglect of proper treatment. The possibility and risks of its general dissemination from unisolated cases are great. Dr. John Lovett Morse has recently emphasized the importance of making hospital provision for this disease, and steps to this end have already been taken in New York. It is to be hoped that the above measure, or one similar to it, may soon adequately be carried out in Boston.

DEFEAT OF THE ANTI-VACCINATION BILL.

The anti-vaccination bill met with an overwhelming defeat in the House on May 14. The vote stood at 133 to 53. Largely owing to the influence of the Christian Scientists the contest was fierce and persistent. The Senate had already approved of the measure, 25 to 9, and the sponsors had great expectations of victory.

Great credit is due Dr. E. H. Bigelow who led the fight in the House. He made the principal speech, exhibited pictures and charts to show the effects of smallpox in contrast to vaccination and did much to convince the open-minded members of the advantages to be derived from the operation. The replies of the State Board of Health to the series of questions suggested by Representative Chamberlain of Springfield also had their effect. Mr. Moore of Leominster and many other public-spirited members of the House deserve the gratitude of the friends of good government for their wise action in defeating the bill.

A MEDICAL VIEW OF THE DWARFS AND JESTERS DEPICTED BY VELASQUEZ.

IN an interesting article of recent date in *Aesculape* Verdier has brought to the attention of the medical world the great attraction which the depiction of the deformed and mentally deficient toys of royalty had for the great Spanish painter. After paying homage to the greatness of Velasquez, Verdier brings out the deep knowledge of pathology possessed by the painter in his startling, life-like depiction of these unfortunates. No modern physician could have told Velasquez the points to bring out in accentuation of the abnormalities of face and figure better than he knew them himself. No artist, said Verdier, had a like power to understand the temperament or the mentality of these people. The dwarfs depicted he finds indisputable examples of pathologic states. The pictures of Philip IV, especially, Verdier says, are the most penetrating psycho-physiologic analysis that an artist has ever made.

MEDICAL NOTES.

CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.—The fourteenth annual meeting of the Canadian Association for the Prevention of Tuberculosis will take place at Halifax, N. S., on July 13 and 14, 1914. Dr. S. Adolphus Knopf of New York has been invited to deliver the oration on that occasion. The subject will be "The Modern Warfare Against Tuberculosis as a Diseases of the Masses," His Royal Highness, the Governor-General of Canada, is the Honorary President of the Association.

OFFICERS: AMERICAN DERMATOLOGICAL ASSOCIATION.—At the thirty-eighth annual meeting of the American Dermatological Association, held in Chicago, May 14-16, 1914, the following officers were elected for the ensuing year: President, Dr. S. Pollitzer of New York; vice-president, Dr. Martin F. Engman of St. Louis; secretary and treasurer, Dr. Oliver S. Ormsby of Chicago. It was decided to hold the next meeting in New York City in May, 1915.

APPOINTMENT OF DR. SMITH AT THE ROCKEFELLER INSTITUTE.—It is announced that Dr. Theobald Smith, professor of comparative pathology in the Harvard Medical School, has accepted the position of director of the new department of animal pathology at the Rockefeller Institute for Medical Research.

AN HEREDITARY CENTENARIAN.—Bridget D. Curran, who died on May 15 at Bethlehem, Pa., is said to have been born in 1807. Her mother is reputed to have lived to the age of 102, and her grandfather to that of 108.

BUBONIC PLAGUE IN HONGKONG.—Report from Hongkong states that 203 cases of bubonic plague occurred in that city during the week ended May 6.

HOSPITAL BEQUESTS.—The will of the late Catharine Paris, of Boston, contains bequests of $10,000 each to the Sacred Heart Hospital, Manchester, N. H., and St. Mary's Hospital, Quincy, Ill.; $5000 to the Home for Convalescent Women, Spring Valley, Ill.; and $3000 to the Claremont (N. H.) Hospital.

NATIONAL ACADEMY OF SCIENCES.—At a meeting of the National Academy of Sciences on April 23, in Washington, D. C., Dr. Walter B. Cannon, Higginson professor of physiology at the Harvard Medical School, was elected a member.

BUBONIC PLAGUE IN HAVANA.—Report from Havana on May 15 states that another case of bubonic plague has been discovered in that city, making a total of 17 since the outbreak of the present infection.

BENETOL IN THE TREATMENT OF HOG CHOLERA.—Report from Minnesota to the United States Department of Agriculture on May 15 states that in experiments by Prof. H. C. Carrel and Dr. E. W. Berg, benetol has been found of great value in the treatment of hog cholera.

HONOR FOR DR. REMSEN.—At a recent meeting of the Chicago section of the American Chemical Society, Dr. Ira Remsen, emeritus president of Johns Hopkins University, was decorated with the Willard Gibbs medal for his distinguished researches in chemistry.

AMERICAN ASSOCIATION OF PATHOLOGISTS.—At the Toronto meeting of the American Associa-

tion of Pathologists, April 10 and 11, papers were read by representatives from the Harvard Medical School as follows: Dr. M. M. Canavan and Dr. E. E. Southard, "Further Studies in the Bacteriology of the Cadaver"; Dr. H. T. Karsner and Mr. Cyrus H. Fiske, "The Effect of Acute Destructive Lesions of the Liver on its Efficiency in the Reduction of the Ammonia Content of the Blood"; Dr. S. B. Wolbach "Concerning the Granule Stage and Filterability of Spirochaetes"; Dr. S. B. Wolbach and Dr. Richard S. Austin, "The Cultivation of a New Filterable Spiral Organism from Human Feces"; Dr. Richard P. Strong and Dr. E. E. Tyzzer, "The Pathology of Oroya Fever and of Verruga-Peruviana"; Dr. E. E. Southard and Dr. M. M. Canavan, "On the Incidence and Nature of Renal Lesions in Subjects Dying Insane"; Dr. H. T. Karsner and Dr. F. G. Benedict, "Pathological Lesions following Prolonged Exposure to Atmospheres Rich in Oxygen"; Dr. H. T. Karsner, Mr. H. H. Amiral, and Mr. A. V. Bock, "A Study of the Influence of Splenectomy and of Certain Organs and Organ Extracts on the Hemopsonins of the Blood Serum"; Dr. J. Earle Ash, "Primary Carcinoma of the Liver" and "Primary Carcinoma of the Lung"; Dr. A. E. Taft and Dr. M. E. Morse, "On a Cerebellar Lesion and Associated Lesions of Dentate and Olivary Nuclei."

St. Mary's Hospital, Rochester.—The recently published twenty-fourth annual report of St. Mary's Hospital, Rochester, Minn., records the work of that institution for the calendar year 1913. During this period, the total number of patients treated was 7020, upon whom 10,166 operations were performed, with a total death rate of 1.5 per cent. Ten patients were not submitted to operation. From the training school 19 nurses were graduated.

Escape of Early the Leper.—Report from Seattle, Wash., on May 19 announces the escape of John R. Early, the leper from the Diamond Head quarantine station near Port Townsend. He is believed to be in hiding at Victoria, B. C.

BOSTON AND NEW ENGLAND.

Smallpox in Attleboro and Boston.—On May 19 a case of smallpox was discovered at Attleboro, Mass., and another in Boston. Neither of the patients had ever been vaccinated.

Scarlet Fever in Milton.—Report from Milton, Mass., on May 16 states that five cases of scarlet fever have recently occurred among pupils of the Milton Academy, which has been quarantined to prevent further spread of the infection.

Children's Hospital Training-School.—The annual graduating exercises of the Children's Hospital School of Nursing were held at the Harvard Medical School on Friday afternoon of last week, May 22. The principal address was made by Dr. Harold C. Ernst. Dr. Frederick C. Shattuck presided.

Faulkner Hospital Training-School.—The annual graduation exercises of the Faulkner Hospital training-school for nurses were held at Jamaica Plain on Tuesday afternoon of this week, May 26.

Deaconess Hospital Training-School.—The sixteenth annual commencement exercises of the training-school for nurses of the New England Deaconess Association were held in Brookline on Wednesday of this week, May 27. The principal address was made by Dr. Daniel Fiske Jones, of Boston, and diplomas were presented to the six members of the graduating class.

Hospital Gifts and Bequests.—A friend of the Sharon Sanatorium has recently presented it $5000, to establish there an x-ray plant for scientific investigation.

The will of the late Francis Skinner of Dedham, Mass., which was filed in probate at that town on May 17, contains a bequest of $10,000 to the Massachusetts General Hospital.

Prevention of Infant Mortality.—On Monday afternoon of last week, May 18, a joint meeting was held in Boston of the Women's Municipal League and the American Association for the Study and Prevention of Infant Mortality. Dr. J. Whitridge Williams, president of the Association, professor of obstetrics at the Johns Hopkins Medical School, made the principal address on the subject of infant mortality, before and after birth.

Fire at Boston State Hospital.—On the morning of Thursday, May 21, a fire occurred in the two-story brick laundry building adjoining the Boston State Hospital, Dorchester. None

of the patients was disturbed and the damage was limited to $1000.

CASES OF INFECTIOUS DISEASES reported to the Boston Board of Health for the week ending May 19, 1914: Diphtheria 42, of which 4 were non-resident; scarlatina 91, of which 8 were non-resident; typhoid fever 5; measles 125; smallpox 1; tuberculosis 65, of which 2 were non-resident.

The death-rate of the reported deaths for the week was 14.86.

NEW YORK.

MORTALITY STATISTICS.—The death-rate in the city during the month of April was considerably lower than in the preceding month. The weekly reports of the Health Department show that the mortality represented an annual death-rate of 14.99, as against 16.42 in March and 15.09 in April, 1913. Among the diseases in which there was a diminished fatality were the following: The weekly average of deaths from diphtheria and croup declined from 46 in March to 40.5 in April; the weekly average from influenza, from 22.75 to 15.25; from epidemic cerebrospinal meningitis, from 4.5 to 3.75; from pulmonary tuberculosis, from 209 to 197.75; from acute bronchitis, from 19 to 15.25; from pneumonia, from 197 to 132.5; from broncho-pneumonia, from 145.5 to 116.25; from organic heart diseases from 238 to 208; from apoplexy and softening of the brain, from 28.5 to 24.75; from appendicitis and typhlitis, from 16.25 to 13.75; and from Bright's disease and acute nephritis, from 126 to 110. Among the diseases in which there was an augmented mortality were the following: The weekly average of deaths from typhoid fever increased from 2.5 to 3.75; from measles, from 17.5 to 20.5; from scarlet fever, from 13.5 to 18; from whooping-cough, from 5.75 to 7.5; from tuberculous meningitis, from 17 to 18; from cancer, from 79 to 87; and from hernia and intestinal obstruction, from 10.5 to 14.75.

REGULATIONS FOR RIVER BATHING.—The Board of Health has reconsidered its determination to prohibit river baths this season, but has adopted stringent rules and regulations for their control. Floating baths must be constructed with water-tight bathing pools and, where river or harbor water is used, this must be purified so as to render it clean and sanitary. Bathing beaches are not permitted within 500 feet from a sewer outlet and water-closet accommodations in connection with such beaches must be so constructed and maintained as not to contaminate the water used by the bathers. The department, it is stated, has obtained the willing coöperation of private bath owners and of the president of the borough of Manhattan in the application of the new rules.

ST. LUKE'S HOSPITAL.—The annual report of St. Luke's Hospital shows that last year 5433 patients were treated in the wards and 22,139 in the dispensary department. In March there were 833 ward patients, the highest record for a single month. Recently an auxiliary of ladies has been organized to enlarge the social service work which St. Luke's has been carrying on for the past three years, for the relief of its convalescents and out-patients. The aims of the auxiliary are to aid the physicians and surgeons of the staff by investigating and relieving the social conditions which hamper the patient's recovery, to confirm the cure by seeing the patient safely through his convalescence, and to safeguard the general health by spreading the educational influence of the hospital throughout the homes of the community. Many a discharged patient, it is stated, finds himself, in the early stage of his convalescence, without a cent of money and without a friend to aid; while many a mother, suddenly obliged to go from her tenement home to the hospital, leaves five or six little children uncared for all day—except perhaps by a girl of eleven or twelve—until the father's return from work at night. The auxiliary aims to look after such as these and many others, and to give intelligent and effective relief through its visiting nurses and social workers.

LEBANON HOSPITAL.—At the annual meeting of the managers of Lebanon Hospital, in the Bronx, held on May 17, the reports showed that during the past year 49,057 cases were treated at the hospital, and that 2888 ambulance calls were made. The cost of maintenance, including the training-school for nurses, was $165,268.

MORTALITY FOR THE WEEK ENDING MAY 16, 1914.—There were 1533 deaths and a death-rate of 14.32 per 1000 of the population reported during the past week as against 1531 deaths and a rate of 14.87 for the corresponding week of 1913, an absolute increase of 2 deaths, and a decrease of .55 of a point in the rate equivalent to a relative decrease of 59 deaths.

Measles showed a decrease of 11 deaths, diphtheria and croup 13 deaths, whooping-cough 2

deaths, digestive diseases other than diarrheal 15 deaths, organic heart diseases 2 deaths, pulmonary tuberculosis 26 deaths, Bright's disease and nephritis 9 deaths and violence 10 deaths. The following causes showed an increased mortality: scarlet fever 4, typhoid fever 4, diarrheal diseases 5, influenza 4, all other causes 68. The number of deaths from acute respiratory was the same as in 1913.

Viewed from the point of age grouping there was an increase of 17 deaths of children under one year of age, between one and five years of age there was a decreased mortality of 41 deaths; between five and sixty-five years showed a decreased mortality of 36 deaths, and at sixty-five years and over there was an increased mortality of 62 deaths, that is the mortality at the extremes of life was considerably increased, while that of children over one year of age and adults below sixty-five years of age evidenced a large decreased mortality.

The death-rate for the first twenty weeks of 1914 was 15.35 per 1000 of the population as against a rate of 15.56 for the corresponding period of 1914, a decrease of .21 of a point.

Current Literature

MEDICAL RECORD.

MAY 9, 1914.

1. ROBERTS, P. W. *The Practical Management of Chronic Osteoarthritis.*
2. MORRIS, R. T. *Let Us Settle the Loose Kidney Question.*
3. BUCKLIN, C. A. *Surgical Treatment for Reduction of Vacuum Caused by Nasal Obstructions.*
4. LUKE, H. C. *Ether-Oil Rectal Anesthesia; Some Theoretical Considerations.*
5. HUBNER, M. *The Practical Scientific Diagnosis and Treatment of Sterility in the Male and Female.*
6. KAHN, M. H. *Four Cases of Multiple Myeloma.*
7. AMSDEN, H. H. *A Case of Vincent's Angina, Treated with Neosalvarsan.*
8. FRANCIS, C. F. D. *A Biological Treatment for Cancer.*

NEW YORK MEDICAL JOURNAL.

MAY 9, 1914.

1. BURR, C. W. *The Relation of Aphasia to Mental Disease from the Medico-legal Point of View.*
2. LLOYD, J. H. *Sensorimotor Aphasia.*
3. SOUTHWORTH, T. S. *Some Observations on the Child of Today.*
4. SOLOMON, M. *Psychoanalysis.*
5. BENEDICT, A. L. *The Psychological Effect of the Fairy Story.*
6. SAPHIR, J. F. *Rectal Cases Under Local Anesthesia.*
7. SEELYE, H. H. *Why Electrotherapy Cures.*
8. HARRIS, J. F. *Brachial Neuritis.*
9. THOMPSON, N. P. *Acute Dilatation of the Stomach Complicating Pregnancy.*
10. BRILL, N. E. *In Memoriam—Dr. Edward Charles Spitzka.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

MAY 9, 1914.

1. MITCHELL, S. W. *The Medical Department in the Civil War.*
2. *VOORSANGER, W. C. *Palliative Effect of Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis.*
3. *CLARK, A. S. *Radium Treatment of Cutaneous Epitheliomata by Single or Massive Doses.*
4. THOMPSON, L. *Cholesterinized Antigens.*
5. *MURPHY, J. B. *Heteroplastic Tissue Grafting Effected Through Roentgen Ray Lymphoid Destruction.*
6. EWING, H. M. *Complete Bilateral Isolated Paralysis of the Seventh Nerve Developing Four Months After the Primary Infection of Syphilis.*
7. *CORBUS, B. C. *Treatment of Gonorrhea and Its Complications by Antigonococcic Serum. A Preliminary Report of Twenty-Four Cases.*
8. FORCE, J. N. *An Investigation of the Causes of Failure in Cow-Pox Vaccination.*
9. CRUMP, A. C. *A New Aid for the Diagnosis of Stricture of the Esophagus.*
10. BROWN, E. J. *Acute Lymphatic Leukemia After Tetanus Serum Anaphylaxis.*
11. WILLSON, H. S. *A Method of Staining and Mounting Smears.*

2. Voorsanger inclines favorably to artificial pneumothorax. He does not believe it is necessary to confine the patient to a hospital for treatment. Many of his cases are done in his own office or the patients' homes. Treatment should be checked by x-ray.

3. Clark advocates the single massive dose in the radium treatment of superficial epitheliomata. He thinks it will prove the method of choice as the dosage may be measured. The two great objections to its use are the cost and length of time of exposure.

5. Murphy, working experimentally on rats and chick embryos, finds that heteroplastic tisssues grow in animals treated with the Roentgen ray, probably by the removal of the lymphoid barrier.

7. Corbus finds antigonococcic serum efficient in the treatment of gonorrhea and its complications. The complement fixation test is a reliable guide to its use as the intensity and efficiency of the two are in direct proportion. The amount should be from 36 to 45 c.c., administered intramuscularly, or from 12 to 15 c.c. a day for three days. Serum sickness, even if distressing, should not be alarming. A negative test after two or three months shows complete cure.

[E. H. R.]

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

MARCH, 1914.

1. *HOWARD, C. P. *The Etiology and Pathogenesis of Bronchiectasis.*
2. CONNER, L. A., AND DOWNES, W. A. *Spontaneous Rupture of the Spleen in Typhoid Fever, with Report of a Case Cured by Operation (Splenectomy).*
3. *WILSON, L. B. *A Study of the Pathology of the Thyroid from Cases of Toxic Non-exophthalmic Goitre.*
4. *ROWNTREE, L. G. *The Study of Renal Function: the Prognostic Value of Studies of Renal Function.*
5. MCCARTHY, D. J. *Iron Infiltration in the Fixed and Wandering Cells in the Central Nervous System.*

6. *KNOPF, S. A. *A Practical Apparatus for the Production of Therapeutic Pneumothorax. With Some Notes on the Modus Operandi, Indications and Contra-indications.*
7. *WOOD, G. B. *Tonsillar Infection: A Preliminary Report Concerning the Passage of Anthrax Bacilli Through the Tonsillar Tissues as Determined by Experimental Research.*
8. PUTNAM, J. J. *On Some of the Broader Issues of the Psycho-analytic Movement.*
9. WEINBERGER, W. *An Improvement of the Benedict Method for the Determination of Sugar in the Urine.*
10. SCHWATT, I. J. *The Application of the Calculus to the Medical Sciences.*
11. SUTTON, R. L. *A Clinical Note on Fibroma Molluscum Gravidarum.*
12. PEMBERTON, R. *The Metabolism, Prevention, and Successful Treatment of Rheumatoid Arthritis. Second Contribution (Concluded).*

1. Howard's article on bronchiectasis is an able discussion of the etiology of the condition with illustrative cases. It is concluded that the condition is clinically not an infrequent one, being too often mistaken for pulmonary tuberculosis. The possibility of a foreign body or of syphilitic stenosis as etiological factors must always be considered. Inflammatory causes are the most frequent. As to the mechanism of production, the most plausible theory is that of Ewart, attributing the dilatation to the joint action of a faulty distribution of air space and bronchial obstruction.

3. Wilson reports further analyses of cases of goitre. His pathological evidence seems to show a constant relative association of increased secretion and increased absorption from the thyroid gland proportional to the degree of toxicity on the part of the patient.

4. Rowntree discusses the significance of the numerous tests of renal function which have recently come into prominence. He concludes that the phthalein test is the one most deserving of general application. When this reveals decreased excretory capacity, one of the blood tests, urea, total non-coagulable nitrogen, or serum cryoscopy, should be employed to determine the presence or absence of cumulative phenomena in the blood.

6. Knopf describes an improved apparatus for producing therapeutic pneumothorax in tuberculosis, and states concisely the indications and contraindications for this treatment. It is recommended in general for cases that have failed to respond favorably to general medical treatment, obstinate hemorrhage and bronchiectasis. The chief contraindications are extensive involvement of both lungs, much cavity formation, pleurisy, ascites or other abdominal distention, cardiac, renal or constitutional disease. It is not recommended in early and favorable cases.

7. Wood reports observations upon the manner of entrance of anthrax bacilli into the tonsil of the hog, showing that they penetrate only through the crypts, passing apparently through the living unaltered cryptal epithelium. [F. W. P.]

APRIL, 1914.

1. *MAYO, W. J. *Cholecystitis Without Stones or Jaundice in Its Relation to Chronic Pancreatitis.*
2. *RUHRÄH, J. *The Treatment of Pylorospasm in Infancy.*
3. DOUGLAS, J., AND EISENBREY, A. B. *Tuberculosis of the Spleen, Septic Infarction, Polycythemia, Splenectomy.*
4. COLLINS, J., AND ELSBERG, C. A. *Giant Tumors of the Conus and Cauda Equina.*
5. *GOODMAN, E. H. *Some Cases of Hypotension Associated with a Definite Symptomatology.*
6. *NICHOLSON, P. *The Clinical Significance of Diastolic and Pulse Pressure.*
7. SIMON, C. E., AND WOOD, M. *The Inhibitory Action of Certain Anilin Dyes upon Bacterial Development. (Second Communication.)*
8. *KRUMBHAAR, E. *Diagnostic Value of Percutaneous Tuberculin Test (Moro).*
9. DILLER, T., AND MILLER, R. T. *The Successful Removal of a Tumor from the Frontal Region of the Brain.*
10. *FARR, C. B., AND WILLIAMS, P. F. *The Total Non-protein Nitrogen of the Blood in Pregnancy and Eclampsia.*
11. PALMER, C. D. *Prolapse of the Ovary; Its Rational Treatment.*
12. JUMP, H. D., BEATES, H., AND BABCOCK, W. W. *Precocious Development of the External Genitals Due to Hypernephroma of the Adrenal Cortex.*
13. *BOND, E. D. *Symptoms Suggesting Pituitary Disorder.*
14. *BARNES, H. L. *The Value of Auto-inoculation in Pulmonary Tuberculosis.*
15. *JANEWAY, H. H. *The Early Symptomatology of Cancer of the Esophagus.*

1. Mayo describes cases of chronic cholecystitis, especially those which he calls the "strawberry type" from the appearance of the lining mucosa of the gall-bladder, with an indurated condition of the head of the pancreas, which he believes to be evidence of chronic pancreatitis. In certain cases of this type treated by drainage of the gall bladder relief occurred, while the drainage persisted, but symptoms recurred as soon as the drainage was discontinued. He believes that removal of the gall-bladder is indicated, cholecystectomy in his cases having given prompt and permanent relief.

2. Ruhräh calls attention to the condition of pylorospasm in infancy in distinction to that of congenital hypertrophic stenosis of the pylorus. These disorders, while similar in their manifestations and perhaps related in their etiology, differ in that the pylorospasm is accompanied by less violent symptoms, is of much better prognosis, and does not always appear immediately after birth. In treatment he emphasizes the necessity of the use of breast milk, and speaks favorably of the giving of atropine in 1-2000 grain doses every four to six hours.

5. Goodman describes cases in which the blood-pressure is found to be subnormal, particularly in association with symptoms of neurasthenia. In a number of these improvement was effected by treatment, after which the blood-pressure was found to have increased. This treatment consisted chiefly of general tonic measures, such as gymnastic exercises and hydrotherapy, which are given in detail. Drug treatment played little part, although some reliance is placed upon strychnine.

6. Nicholson urges that greater attention be devoted to the observation of diastolic as well as of systolic blood-pressures, the former being now readily determined by the auscultatory method. He also describes a portable mercury sphygmomanometer which he has devised, less bulky than those in common use.

8. Krumbhaar and Musser report a series of 149 cases in which the Moro percutaneous tuberculin test by inunction of a tuberculin paste in lanolin was applied. The tendency to react positively in cases clinically not tuberculous, which has caused the von Pirquet test to be discarded for use in adults, was little in evidence, since in 76 unselected non-tuberculous cases only 5 failed to give a negative reaction, and in only 2 was the reaction definitely positive. Of 44 tuberculous cases all reacted positively with the notable exception that of 10 cases of far advanced pulmonary tuberculosis 9 reacted negatively and 1 doubtfully positively, a finding consistent with the results of other tuberculin tests in advanced tuberculosis. It is concluded that the prevalent opinion that positive reactions in adults are of little or no value is erroneous.

10. Farr and Williams find that in normal pregnant women the total non-protein nitrogen does not usually exceed 30 mg. per 100 c.c. of the whole blood, but may reach 40 mg. or more without demonstrable renal lesions. In all of their cases in which there was definite renal insufficiency or eclampsia, with one exception, there was always a slight, and in most cases, a marked, increase in the total non-protein nitrogen, similar in degree to that found in parenchymatous nephritis, but less than that found in interstitial nephritis. The retention, however, bore no relation to the severity of the symptoms, and its significance is regarded as inferior to that of rising blood-pressure albuminuria and the general clinical picture.

13. Bond urges a closer scrutiny of insane patients for evidence of pituitary disorder. In 1600 consecutive autopsies on insane patients, lesions of the pituitary body were found in 45, and in a brief survey of the inmates at one time of the Danvers Hospital 10 cases with suggestive symptoms were found.

14. Barnes reports experience with graduated exercise in pulmonary tuberculosis similar to Patterson's auto-inoculation method. While he regards this treatment as advantageous where it can be carried out without inducing symptoms, and as of value as a test of the patient's fitness to return to work, he warns against the belief that fever reactions or auto-inoculations are other than harmful.

15. Janeway has analyzed the first symptoms of 21 cases of cancer of the esophagus, finding that dysphagia is not by any means always the first to appear, and that in a small minority only was the diagnosis made before three or four months after the patient had symptoms. [F. W. P.]

BULLETIN OF THE JOHNS HOPKINS HOSPITAL.

MAY, 1914.

1. *MILLER, S. R., AND LEVY, R. L. *The Colloidal Gold Reaction in the Cerebrospinal Fluid.*
2. *SELLARDS, A. W. *The Essential Features of Acidosis and Their Occurrence in Chronic Renal Disease.*
3. CAMPBELL, C. M. *The Work of the Out-Patient Department of the Henry Phipps Psychiatric Clinic.*
4. WHITHAM, L. B. *Dystrophia Epithelialis; Report of a Case.*
5. CHARLTON, M. *Louis Hébert.*

1. The writers conclude that the gold test is essentially a laboratory method requiring extreme care in preparing reagents and cleaning of glassware. Normal fluids give normal reactions; the test has no value in purulent or tuberculous meningitis, and has no advantage over known laboratory methods in diagnosing syphilis. Reactions are inconstant in secondary and tertiary stages; positive reactions observed in the majority of cases of tabes and cerebrospinal syphilis are not characteristic, while the reaction peculiar to paresis seems to be of some value in differential diagnosis.

2. Sellards states that the essential feature of acidosis consists in a general impoverishment of the body in bases or in substances which readily give rise to bases. The fundamental features of every acidosis as thus far established are: (*a*) an increase in the tolerance of the body to fixed bases, (*b*) a diminution in the titratable alkalinity of the body serum, and (*c*) a diminution in the carbon dioxide of the blood. An acidosis of high grade occurs in certain nephropathies, especially in the uremia of acute and chronic diffuse nephropathy. It is not a terminal event and is often present in relatively high grade outspoken cases many months before the development of the uremia. It represents the effect rather than the cause of the renal lesions. [J. B. H.]

THE JOURNAL OF INFECTIOUS DISEASES.

MARCH, 1914.

1. *AYERS AND JOHNSON. *Pasteurization in Bottles and the Process of Bottling Hot Pasteurized Milk.*
2. DICK. *Ferments from Carcinomatous Protein in the Blood in Carcinoma.*
3. KING AND DRAKE. *Some Phenomena Involved in the Life History of Spirochaeta Suis.*
4. DRENNAN. *A Non-Cholera Vibrio Resembling the True Cholera Vibrio and a Pigment-forming Vibrio.*
5. *JANSEN. *The Disinfectant Action of Certain Bacterial Stains.*
6. WILLIAMS ET AL. *A Study of Trachoma and Allied Conditions in the Public School Children of New York City.*
7. PARK, FAMULENOR AND BANZHAF. *Influence of Protein Content on the Absorption of Antitoxin and Agglutinin Injected Subcutaneously.*
8. PARK, FAMULENOR AND BANZHAF. *Serum Sensitization as Related to Dosage of Antitoxin in Man and Animals.*
9. PEARCE AND WILLIAMS. *Protective Enzymes, Cytotoxic Immune Sera and Anaphylaxis.*
10. LAKE, OSBORNE AND WELLS. *The Immunological Relationship of Hordein of Barley and Gliadin of Wheat as Shown by the Complement Fixation, Passive Anaphylaxis and Precipitin Reactions.*
11. WELLS AND OSBORNE. *The Anaphylactogenic Activity of Some Vegetable Proteins.*
12. LAKE. *The Immunological Reaction of the Proteins of the Human Placenta, with Special Reference to the Production of a Therapeutic Serum for Malignant Chorion-Epithelioma.*

1. Pasteurization in bottles is a safe and easy process, provided the temperature is maintained within the bottle a sufficiently long time. The one drawback to this method is the expense of water-tight caps, which are necessary. To avoid this the milk is first pasteurized and then, while hot, is poured into bottles which have just been steamed for two minutes. This process is safe, inexpensive and easy. In this way bottle infection is eliminated and the ordinary cardboard caps may be employed. The bottles are air cooled. The sole disadvantage of this method is the loss of time in those plants where milk is delivered directly after pasteurization.

5. Aqueous solutions of methyline blue of fuchsin show very slight bactericidal power. Such solutions of gentian violet, however, are markedly bactericidal to gram-positive organisms, even in very weak solutions. Anilin gentian violet and carbol fuchsin, as made up for staining, show a decided disinfectant action upon cover glass preparations. This action is due to the stain, especially in the former case; mice controls, controls consisting of dried, fixed, but unstained preparations, showed organisms in the subcultures. No such bactericidal action was produced by laboratory methyline blue. Those facts are of practical importance to laboratory workers. Mice slides and cover glasses may in some instances, but not in others, be handled with safety, according to the stain employed. [L. H. S.]

THE LANCET.

APRIL 25, 1914.

1. *ORMEROD, J. A. *The Lumleian Lectures on Some Theories Concerning Hysteria. Lecture I.*
2. *WATSON, D. C. *Intestinal Toxemia, with Special Reference to the Indications for Operative Treatment.*
3. ADAMS, J. E. *The Drainage-tube in Abdominal Surgery.*

4. BALFOUR, A. *The Wild Monkey as a Reservoir for the Virus of Yellow Fever.*
5. FREEMAN, J. *Vaccination Against Hay Fever; Report of Results During the Last Three Years.*
6. RAMSAY, A. M. *The Use of Omnopon-Scapolamine Combined with Local Anesthesia in Ophthalmic Surgery.*
7. WHITEHEAD, G., AND MORLEY, J. *Extraperitoneal Uretero-Lithotomy through a Median Suprapubic Incision.*

1. Ormerod, in this first Lumleian Lecture, discusses in a general way hysteria, its relation to neurasthenia, its symptoms, such as hysterical fits, anesthesia, hysterogenic zones, contractures, skin affections, edema, wasting, ecchymosis, et al.

2. Watson, describing the various clinical manifestations of intestinal toxemia, believes that treatment is largely medical and in the earlier stages it can be cured if medical treatment is efficiently carried out. In advanced cases, however, surgical intervention seems to offer the only hope. X-ray examination is essential to arrive at a proper diagnosis. Lane's short circuiting operation is simple, but in inexperienced hands is often unsatisfactory. Before any operation a prolonged course of medical treatment is advisable. [J. B. H.]

BRITISH MEDICAL JOURNAL.

APRIL 25, 1914.

1. *DAVIES, H. M. *The Therapeutic Value of Gases Introduced into the Pleural Cavity.*
2. ROUTH, A. *The Need For Research in Ante-natal Pathology.*
3. HANDLEY, P. A. *Pituitrin in Labor.*
4. BUIST, R. C. *Two Cases of Pregnancy in Uterus Subseptus.*
5. JAMISON, P. *Carcinoma of the Stomach; Gastrectomy.*
6. *SYMES, J. O. *The Association of Erythema Nodosum and Tuberculosis.*
7. ELLIOT, R. H. *The Experiences of Surgeons in Sclero-Corneal Trephining.*
8. BLACKLOCK, B. *On the Multiplication and Infectivity of T. Cruzi in Cimex Lectularis.*

1. Davies believes that those cases of phthisis suitable for artificial pneumothorax are: (1) those with a persistent fever, (2) profuse or repeated hemorrhage, and (3) cases with cavity formation. He describes in detail his technic, and among complications mentions pleural reflex and gas embolism. He is in favor of frequent refillings at first and of keeping up the treatment for at least eighteen months. He discusses immediate and remote results, the value of other forms of treatment, tuberculin, exercises, etc., in conjunction with nitrogen treatment. He also speaks of this treatment for bronchiectasis and putrid bronchitis. There are some excellent plates.

6. Symes presents evidence which is fairly conclusive showing the close connection between erythema nodosum and tuberculosis, although he believes that in certain forms at least the disease is a distinct clinical entity. [J. B. H.]

THE QUARTERLY JOURNAL OF MEDICINE.

VOL. 7. NO. 27. APRIL, 1914.

1. *BUTTERFIELD, H. G., AND HUNT, G. H. *Observations on Paroxysmal Tachycardia.*
2. *MCNEE, J. W. *Cholesterin: An Account of Its Relations to Pathology and Physiology.*
3. *THURSFIELD, H. *Bilateral Salivary Swellings. A Clinical Review.*
4. *KEMP, C. G. *On the Prognosis of Acute Articular Rheumatism, with Special Reference to the Cardiac Manifestations.*
5. MCINTOSH, J. *Critical Review: Anaphylaxis and Its Bearing on Medicine.*
6. SIMONS, I. *Critical Review: Bacterial Endocarditis.*

1. Four cases of paroxysmal tachycardia are reported, with histological examination of the heart in three of them. The latter confirmed the clinical diagnosis, which was based on the study of electrocardiograms and of venous tracings. In the first case the extra-systoles appeared to be of ventricular origin, for the auricular rhythm was undisturbed and the form of the extra-systoles differed from that of beats of supraventricular origin. At the autopsy a marked lesion was found in the interventricular septum, consisting of fibrosis involving two-thirds of the thickness of the wall. The second case was clinically, judging from the shape of the beats in the electrocardiogram and the presence of an auricular wave in the venous tracing, a paroxysmal tachycardia of auricular origin. At the autopsy there were found a well marked infiltration with lymphocytes and two small hemorrhages in the region of the sino-auricular node. The a-v node and bundle were intact. In the third case, also of auricular origin, there were perivascular lymphocytic infiltrations about the sino-auricular node.

2. McNee reviews the recent work on cholesterin in the blood and tissues, including some interesting studies of his own. The cholesterin content of the blood is increased in a number of conditions, *e.g.* Bright's disease, diabetes, jaundice, adiposity, arteriosclerosis and pregnancy. Where the amount in the blood is too large the cholesterin of the bile is increased also. Hence the relation of pregnancy, and adiposity, to gall-stones, especially the solitary stone of pure cholesterin, which, as the researches of Aschoff show, may arise without inflammation. These facts also explain the association of exanthemata, in which the cells are stuffed with cholesterin, with diabetes and chronic jaundice; also the "white spots" in the retina, which consist of cholesterin, with Bright's disease and diabetes.

3. The Mikulicz syndrome consists of bilateral painless swellings of the salivary, and sometimes of the lachrymal glands. It is sometimes associated with enlargement of the lymph nodes and spleen, with or without the blood changes of leukemia. Thursfeld's case was remarkable for the rapidly fatal course and the blood picture, that of an "aplastic" anemia with marked decrease in the leucocyte count and lymphocytosis. He calls it aleukemic leukemia.

4. Kemp examined the hearts of a large number of cases of acute articular rheumatism two years or more after they left the hospital, to determine whether the murmurs heard were due to organic disease of the valves, or to mitral insufficiency resulting from myocarditis. The results confirm the statements of Romberg and others that myocarditis is a frequent cause of such murmurs, for 22% of the cases developed signs of carditis, which disappeared during convalescence, and in 20% of those who showed signs of endocarditis not clearing up before discharge from the hospital, a later examination showed the heart to be quite normal. Only 22% of the total number showed no signs of cardiac disease throughout the acute attack. [W. T.]

MÜNCHENER MEDIZINISCHE WOCHENSCHRIFT.

NO. 16. APRIL 21, 1914.

1. *NEUBAUER, O. *Creatinin as a Test for Renal Function.*
2. WILMS. *Artificial Solidifying Fluid in Tuberculosis of the Lung.*
3. ABDERHALDEN, E. *The Discovery of Protective Ferments by Colored Substrata.*

4. ABDERHALDEN, E., AND WILDEMUTH, F. *Repeated Dialysis in Determining Protective Ferments by the Dialysis Method.*
5. ROSENTHAL, F., AND BIBERSTEIN, H. *Experimental Studies on the Specificity of Proteolytic Serum Ferments. Third Communication.*
6. ABELIN, J., AND PERELSTEIN, M. *The Perishable Factors of Coffee.*
7. BACHE, M., AND AUEL, W. *The Influence of Breathing on Albumin and Carbohydrate Metabolism.*
8. DECKER. *The Necessity for Albumin in the Diet in Relation to the Increased Cost of Meat.*
9. LINDBOM, O. *Sennatin.*
10. FUCHS, W. *Epilepsy and Luminal.*
11. LEHNERT. *The Treatment of Anomalies of the Blood with Dürkheim Spring Water and Arsenic Baths.*
12. MANN, M. *A New Symptom of Cerebellar Abscess.*
13. *BECK, R. *Two Cases of Nutmeg Poisoning.*
14. GERBIS, H. *A Peculiar Condition of Narcosis from Chlormethyl.*
15. HEINEMANN, O. *The Diagnosis of Salivary Stones.*
16. MAYER, H. *Grotan as a Therapeutic Remedy.*
17. SCHNEIDER, E. *An Arm Cuff to Aid Intravenous Injections.*
18. WINTZ, H. *A New Finger Curette.*

1. Neubauer has introduced creatinin as a test for renal function. Normally, creatinin is formed from endogenous protein destruction and thus the amount excreted is nearly constant without regard to the diet. Neubauer considers that this fact makes the excretion of the substance a valuable test for renal function, since patients to be studied require no special diet, and can be observed when they are up and about, as well as when they are in bed.

To make the test, the creatinin excretion is followed every four hours for three days. On the second morning a test meal is given which contains 105 gms. of the pure substance dissolved in sugar-water. Normally it is excreted almost immediately. With diseased kidneys, its excretion is delayed in proportion to the degree of functional disturbance. For the differential diagnosis between marked passive congestion and true nephritis, the test is of as little value as are most of the other tests based upon the excretion of physiological substances. Marked disturbances of creatinin excretion occur with congestion as well as with nephritis. Finally, in advanced nephritis, creatinin accumulates in the blood significantly, and parallels the retention of nitrogen and urea.

13. Beck reports, on account of its rarity, two cases of nutmeg poisoning which occurred in two of the hospital servants. Two women prepared a drink of nutmeg, cinnamon and wine, and after taking it, remained in a comatose condition for a considerable period. Both recovered. The mixture was taken by one to induce abortion, and by the other to make a diagnosis of early pregnancy, since she had been told that nutmeg would induce menstruation in the event of lacking pregnancy.

Beck reviews the literature on the subject of the toxicity of nutmeg. It has been used in the cases reported to induce abortion, and has produced the symptoms of stupor which were seen in Beck's cases. The pharmacological basis for its supposed action appears to be the fact that its oils in enormous dose cause congestion of the abdominal and pelvic organs. [R. F.]

REVUE DE MÉDECINE.

FEBRUARY, 1914.

1. LEPINE. *New Internal Secretions and New Functions of Vessels.*
2. LARBÉ AND BITH.—*Amino-aciduria Provoked by the Ingestion of Peptone and the Diagnosis of Hepatic Insufficiency.*
3. *DEBRÉ AND PARAF. *"The Antigen Reaction" (Completed).*

3. The conclusions which Debré and Paraf draw from the present and previous articles upon the use of a complement-fixation reaction upon tubercular fluids are of great value. The reaction is specific in a very high percentage of cases when performed on the urine secreted by kidneys, affected by almost any variety of tuberculosis,—whether granular, ulcerative, or even amyloid. Such reactions are not present in the urine from healthy kidneys even of individuals suffering from pulmonary tuberculosis. Similar reactions have been performed with great success in pleural and abdominal fluids, whether serous or purulent. The application of the test to cerebro-spinal fluids and blood sera has not been productive of very constant results. Its use in sputum is encouraging and deserves further trial. [L. H. S.]

BULLETTINO DELLE SCIENZE MEDICHE.

NOVEMBER, 1913.

1. *SCHIASSI, B. *Sub-Total Resection of the Stomach.*
2. GURRIERI, R. *Zoösperms Included in Lamellar Seminal Concretions and in Urinary Calculi in Relation to Medico-Legal Researches.*

1. In this continued and concluded article, Schiassi describes details of technic and indications for procedure, and presents clinical demonstrations and radiographic documents. His work is an elaborate and well executed piece of clinical study and research. [R. M. G.]

DECEMBER, 1913.

1. *RAVÀ, G. *So-Called Paralytic Oculo-Cephalic Deviation from Lesion of One Cerebral Hemisphere.*

1. Ravà reports and discusses 16 cases presenting the symptom-complex described in his title. He believes that such deviation is not solely dependent on the paralysis, but is determined by the activity of healthy sensory centres not counterbalanced by corresponding activity of injured homologous sensory centres, principally those of vision. [R. M. G.]

Miscellany.

MEDICAL STATUS OF THE UNITED STATES ARMY.

IN the current issue of the *Engineering Record* is an article by Dr. William C. Gorgas on army camp sanitation. The following extract may serve to represent the opinion of the surgeon-general on the medical status of our troops in case of possible war in Mexico.

"In the event of an invasion of a sub-tropical country by our army the sanitary precautions to be observed by our troops would be of supreme importance. Our precautions must, however, begin at home in our assembly and concentration camps. In the war with Spain in 1898 we were handicapped by lack of training and experience

in camp sanitation. We had practically no experience in the tropics. The great development of preventive medicine was not then in a stage convenient for practical application.

"In any contemplated occupation of a country lying partly in the tropics by an army coming from the temperate zone there would be two stages to consider with reference to the precautions necessary to the preservation of the health of such a command—first, the measures required to avoid the "camp diseases" in the homeland while the troops were mobilizing and training and second, the measures required to avoid the diseases peculiar to the country to be occupied. The first sanitary precaution is to secure healthy soldiers—physically sound men. Then it is necessary to safeguard their health while in training by giving them pure food, water and healthy camp surroundings and by preventing the entrance to such camps of infectious diseases.

"When we have to deal with the question of potable water in the enemy's country, and especially in the field, we deal with a more difficult problem, but by no means a hopeless one. Efforts are made to ascertain the quality of the water by examinations and by its reputation when that is practicable. When deemed necessary—and this is the case with all surface waters in the tropics, unless we except some mountain streams—we try to render the water safe for drinking purposes by such measures as may be possible in the field. However, it will often occur that under military stress, lack of time and transportation, troops for short periods must use the water that the natives depend upon. Under these circumstances we may look for the appearance of such diseases as are water-borne and are prevalent in the communities using the water. The methods to render the water potable are naturally those used in temporary emergencies as a rule—boiling, filtering and the use of chemicals. Portable appliances are used in the army to render the water safe.

"Only less important than a supply of potable water in camp is an efficient method for the disposal of human wastes. Excreta in camp become a most dangerous focus for the dissemination of such diseases as are spread through this means by direct contamination or pollution of water and milk and by flies. In the last large camps maintained by the army in Texas in 1911 and 1913 a most efficient system was used. On still larger scale but for a shorter time the same system was in use at the Gettysburg reunion in 1913. For a year in the Texas camps this system has given complete satisfaction.

"Flies spread typhoid, dysentery and perhaps other diseases. It is necessary, then, to devise a method of gathering and destroying both stable sweepings and kitchen wastes. In camp the army has disposed of this by burning the sweepings after they are gathered at a dump and by burning right at the kitchen door the wastes therefrom. Moving troops in the field, as a rule, have no trouble with the disposal of these wastes, as they are so scattered that the amount constitutes no menace.

"In such an army as might be mobilized for service abroad we would expect some 120,000 regulars, and twice as many volunteers. There will be, therefore, a considerable proportion of green men to be taught camp sanitation, as well as given military instruction. Much of this will be given in concentration camps. There exists a yeast to leaven the whole that was absent in 1898. Since that year the officers of the medical department of the army have been studying and practising military hygiene and sanitation with brilliant results, as demonstrated in the two large camps in Texas. Here ten thousand men lived for a year at a time with sick rate lower than that at the average post. The army, then, is in an entirely different position from that at the outbreak of the Spanish War.*

"Anti-typhoid inoculation which has been in vogue in the army since 1909, and which so efficiently protected it in 1913 that there was but one case among the inoculated in the army of 90,000, is to be trusted to keep our camps free of this disease so fatal to armies of the past. The dysenteries will be held in abeyance by many of the precautions that prevent typhoid, particularly the safeguarding of water and the early exclusion of such cases from the camps. Yellow fever is robbed of much of its terror by the fact learned in 1898 by Reed and his devoted band, which taught us the means of transmission and, consequently, the manner of avoiding it. One other disease, typhus fever, we have learned, is spread by the bite of the louse, and, in consequence, we are enabled to limit its ravages.

"Thus, forewarned, we are forearmed and enter any campaign confident of our ability and in the sanitary training of the line to feel that we can exist in the campaign in a state of "hygienic competence" that the disabilities of the war will be limited, for the first time in the history of the New World, to wounds, and that disease will not kill more than bullets. The American people will have what they should have for the generous support given every year—the most efficient army of its size in the world."

CANCER MEETING IN BOSTON.

AT the invitation of the Boston City Federation the American Society for the Control of Cancer held a public meeting for the discussion of the cancer problem at Huntington Hall, Boston, on Tuesday afternoon, May 19. Similar meetings have recently been arranged by the Cancer Society in New York, Chicago, St. Louis, Pittsburgh and other cities.

The meeting was under the auspices of the Boston Federation of Women's Clubs. Since the

* [During the Spanish War of 1898, 20,000 cases of typhoid fever occurred among our soldiers in the field or in camps.—ED.]

meeting was held on the same day as the opening session of the annual meeting of the American Gynecological Society, when many visiting physicians were in Boston, it was possible to secure speakers representing a widely distributed experience, who discussed the various phases of cancer with an unusual degree of authority.

The president of the Boston Federation of Women's Clubs, Mrs. Frank L. Young, opened the meeting as chairman, and Dr. Edward Reynolds, vice-president of the A. S. C. C., introduced the first speaker, Frederick L. Hoffman, LL.D., statistician of the Prudential Life Insurance Company of America and chairman of the committee on statistics of the A. S. C. C., who presented the evidence of "The Prevalence and Increase of Cancer in the United States." The work and purposes of the American Society for the Control of Cancer were described by Dr. F. F. Simpson of Pittsburgh, Pa., one of the founders of the Cancer Society and a member of its executive board. Dr. J. Collins Warren of Boston, a trustee of the Society, discussed the cancer problem from the point of view of the Huntington Cancer Commission of Harvard University of which he is chairman.

The second half of the meeting was devoted to a symposium of public education on cancer in which a number of physicians of recognized authority in their special fields indicated what the public should know about this disease in order to avoid its suffering and mortality. Among these five minutes' addresses were the following: Dr. Mixter of Boston spoke on cancer of the digestive organs. Dr. Walter W. Chipman of Montreal discussed cancer of the breast. Dr. Howard C. Taylor of New York discussed uterine cancer, and Dr. David Cheever of Boston described the symptoms and treatment of external cancer.

The need of public education and the social aspects of the cancer problem generally were summarized in a brief address by Rev. Dr. George A. Gordon who closed the meeting.

Correspondence.

PARIS LETTER.

THE MEDICAL ATMOSPHERE OF THE RENAISSANCE, AS PORTRAYED IN SOME EARLY FRENCH WRITERS.

I. PHILIPPE DE COMMYNES.
(1490, Circa.)

(From Our Special Correspondent.)

PARIS, April 16, 1914.

"Dixisse me aliquando penituit, tacuisse nunquam."

(Inscription on the wall of the dungeon at Loches, ascribed to Ph. de C.)

Mr. Editor: In a former letter (January 9, 1913) I dwelt at some length on the medicine of the 17th century in France, as revealed in Molière's "Malade Imaginaire" (1673), and on how man's substratum of plain commonsense *will* come to the fore and protect him, in spite of all that perverse thought and erroneous doctrines can accomplish toward his undoing: *e.g.* the course of treatments applied by Dr. Purgon, and the friendly advice of the level-headed brother; sager counsels could hardly be preferred even at the present time than those of Béralde.

But if we go further back still, to the early times of the Renaissance, and examine the leading writers of the day, we again find a similar state of affairs: on the one hand what we can scarcely call anything else than sheer folly, in medical circles, acceptable to a certain number of panic-stricken patients; and on the other, the part of the population which (even in a state of illness, as in the case of Montaigne) looked on the question from a practical and sensible standpoint, and refused absolutely to be duped by the errors and superstitions of the practitioners of the epoch.

There are among the interesting old writers of that period, three who stand out preëminent in this respect,—Philippe de Commynes, our excellent confrère François Rabelais, and Michel de Montaigne, and I think that a brief exposition of their views on medical matters may not prove devoid of instruction. If I were to take these authors in their order of interest, that incomparable master of good-humored satire, Rabelais would unquestionably be entitled to precedence. But it will be best to treat them chronologically, and in this respect Commynes comes first, his classical Mémoires dating from the end of the 15th century, just about the time of the discovery of America, to be exact.

This book is one of the chefs d'oeuvre of French literature, as can be imagined when I say that after a lapse of over four centuries it still reads as easily as a novel and is said to be, after the Holy Scriptures, one of the works that has been re-issued the oftenest. Philippe was the intimate friend and counsellor first of Charles, Duke of Burgundy, and then of three kings of France in succession, Louis XI, Charles VIII and Louis XII; but it is chiefly with the reign of Louis XI (1461–1483) that he deals, and his portrait of this ruler is the standard on that subject. Whether we consider his remarkable delineation of the political atmosphere of the day, his power of description, his astounding memory *ex post facto* of the entangled threads of intricate negotiations, or his philosophical reflexions as to the difficulties of being King in this world,—all is equally absorbing; and at the same time the quaint old French in which the narrative is couched adds manifestly an element to the story, as *we* see it, that must of course have been lacking to readers of the times, although Montaigne, who wrote nearly a century later, and who refers in his Essays to the works of both Rabelais (who came between the two) and Philippe, speaks of him in the most flattering terms, toward the end of Chapter X, Book II.

Not among the least interesting of de Commynes' characteristics is his implicit faith in Divine Providence and evident conviction of the presence of a personal guiding-hand in all matters, public or private, as well as of his, Philippe's, ability to see the action of this hand and detect its purpose. The fashion in which Philippe carries his Providence, as it were, about with him in his breast-pocket, and brings it in whenever called for, despatching the believer, no matter how sinful, to paradise, and the infidel, no matter how deserving, to sheol, is really remarkable, on the part of one of the most prominent and capable men of the day. For instance, in referring to the death of a certain Turkish prince he remarks: "en cecy ne parle point dudit Turc, car je tiens ce point pour vuidé et qu'il est logié avecques ses prédecesseurs." This comes pretty near to the doctrine of the Wahabees, who are reputed to claim that the world is divided into 73 religious sects, of which theirs alone is destined to salvation.

Philippe has left no actual discourse on medical matters, as did Montaigne and Molière; but he was more

or less mixed up with the end of several very prominent men, and in particular of Louis XI, and was in this way led to chronicle various doings and sayings that throw light on the medical customs of the times, although so far as he personally was concerned, his clear intellect appears to have enabled him to take a rational view of medical matters and to estimate the science of his day at its true value.

Taking up, then, first the case of Louis XI,—this sovereign had an initial stroke of apoplexy in March, 1480, a second one the year following, and his final illness in August of 1483,—a total duration of three and a half years. Louis was an unusually authoritative man, even for those days, had his way in all matters, and exacted implicit submission from everyone connected with him; and in particular the historian remarks that "by nature he was disposed not to place faith in the advice of physicians." But he also says: "never did man fear death so greatly,"—so much so that he constantly directed those about him, in event of illness, to be careful what they said to him, to advise him merely to confess himself, and not to make use of the word death. Yet observe the irony of Fate! This domineering spirit, that doubted his physician's word, and lived in terror of death and all connected with it, was finally forced to place himself implicitly in the hands of his intimates, became terrorized by his medical attendant whom he placated by the payment of large sums of money, and finally had his death-sentence served to him in such a brutal manner as to draw forth the indignation of even such a moderate and reserved man as the historian.

Commynes was away at Argenton, his château, when the first stroke occurred near Chinon, and it is a curious coincidence that he was likewise absent in the same manner when Charles VIII had his cerebral hemorrhage at Amboise. However, he describes the event evidently from the account of the spectators, and we have here in a few lines an exact tableau of what practically always takes place when a medical catastrophe strikes one of a group of laymen, who with this apparently irresistible human impulse to be doing something, although utterly ignorant of the elements of the proposition, find it impossible to refrain from making a bad job worse, and seem the more determined in their misguided efforts in proportion to their lack of intelligence. Could anything be more descriptive of this state of mind than Commynes' half dozen lines: "at dinner he was seized with a stroke and lost the power of speaking. He was removed from table and kept near the fire, with the windows closed; and although he made every effort to get to them, his companions prevented him (acting for the best, as they thought)." So much for that part of the scene, now comes the complement, the arrival of the medical man. He, naturally, has also to appear to be doing something; but as it would never do to let the laymen think they had acted correctly, the man of art usually orders the opposite to what has already been done; sits the patient up, if he had been laid flat, gives him air, or water, if these have been witheld, and so on: "Thereupon you arrived, who were his physician at that time, and at once gave him an enema and opened the window to let in the air." Now if this whole scene is not the neatest little piece of irony on the classical performance on such occasions, then I confess to being grossly mistaken.

Little by little speech began to return to the royal patient, whose first act was to unburden himself to his confessor who had been summoned from Tours, although, as the historian remarks, "he had not very much to say, as he had already confessed himself a few days previously, because, when the Kings of France wish to lay hands on those afflicted with scrofula, they first go to confession, and our King never failed in this (laying on of hands) once every week. If the others (kings) do not do this, it is a great pity, as there are always plenty of sick people." We are here, consequently, right in the heyday of those fortunate times when organic disorders yielded to the contact of divine right! Being now in a state of grace and filled with the milk of human kindness, Louis' next act was the following. He inquired and ascertained who were those that had restrained him by force on the occasion of his stroke; these he at once drove from his court, taking from some of them their positions and dismissing them once and for all, while from others he took nothing but sent them off. "Many were astounded at this action, which they criticized adversely, saying that they had acted for the best, and so they had"; but Louis was so in fear of anyone venturing to infringe on his rights, even with the purest of intentions, that nothing of this sort could be tolerated.

If now we turn to his final illness, August, 1483, which lasted from Monday to Saturday, we find ourselves in the presence of a very different man. Louis is now broken in spirit, suspicious of everyone, in terror of death, and placing his last hope in holy men and physicians. And here again we have the usual tableau of such occasions: the infinite hoping against hope, "for notwithstanding his misfortunes his courage rose and he quite expected to recover"; truly Aeschylus never had a deeper thought than when he made Prometheus take away from mortals the power they once had of foreseeing future events, and gave them in its stead *blind hope*,—observe the force of the qualifying adjective,—hope in spite of anything, everything and everybody, what would life be without hope,—an unthinkable nightmare.

The other characteristic of such crises is the feeling of hate toward the medical attendant; when the patient finally comes to the realization that his end is near; when *their* life is at stake the man of science ought to be able to arrest the flight of time, to change the order of the seasons, and to reverse the orbits of the celestial bodies. Connected with this frame of mind is the thought, generally felt, sometimes openly expressed, that if the medical attendant would only give himself the trouble, a remedy could be found! To gain this end no means is too vile. With Louis it took the form of bribes: "his physician, Maître Jacques, in whom he had complete confidence, and to whom he gave 10,000 'escus' each month, in the hope that he would lengthen his life and that he would bear his case constantly in mind, setting aside all other thoughts." Maître Jacques may have had other patients as ill or even more so; these were all to be dropped, because the royal patient *had the money to pay!* This is a condition of spirit not unknown in our own day with a certain type of mind, witness the following anecdote: One of our very wealthy and very well-known society women was ill with a self-limited disease at one of the very swell hotels in Paris where she was attended by a very fashionable doctor. The whole matter was, as you see, quite an extra-special performance! The disease was running its usual course without incident, but the patient could not understand how such a thing could be, with a person of her importance; this was all well enough for hospital patients, but for *her!* So she finally made the following epic speech to the medical attendant: "but doctor, why do you not give me something to break up this disease and stop it short; you *must* have remedies that will do this, *which I can pay for but which others cannot.*" The more one reflects on that creature's mentality,—and she is a very important person and no fool,—the more astounding does her remark become.

But to return to Maître Jacques, who appears to have been quite a character for the day, and whom we can perhaps look on as the prototype of a kind of physician existing also at the present time, the man who without any particular medical merits retains his patients' allegiance by a process of "bulldozing," if you will pardon the term. During the last five months of Louis' life this artistic confrère extracted from his august charge "fifty thousand écus in hard cash, the bishopric of Amiens for his nephew, as well as other positions and properties for himself and

friends." Now when we consider the difference in the value of money between those days and ours, and if I am correct in estimating the écu at three francs, you must agree with me that for a poor sinful mortal that doctor didn't do so badly by himself and relations! The historian proceeds: "The said doctor was so very rough with him that no one would say to his valet the offensive and rude words that he used; but the King stood so in awe of him that he did not dare to discharge him. The King complained concerning him to those around him, but he would not have ventured to change him as he did all his other servants for the reason that the said doctor used to fling the following taunt impudently in his face: "Je scay bien que ung matin vous m'en envoyrez comme vous faictes d'autres; mais par la . . . (ung grant serment qu'i juroit), vous ne vivrés point huyt jours aprés!" Isn't that simply lovely?

Finally this mighty ruler who had always lived in such awe of death that he had time and again desired his intimates never to speak of it, but, when the time came, to resort to subterfuges, to "go easy," as the expression appears to mean (parlés petitz), had his death warrant flung in his face in the following cavalier fashion. Having observed that the king continued to shut his eyes to facts, in spite of the gravity of his condition, three members of his immediate circle, one of whom was our distinguished confrère Dr. Jacques, decided that the truth must be made known to him, and laid the situation unmistakably before him in the following terms: "Sire, we must fulfil our duty; cease hoping in this holy man (a hermit he had sent for from the far end of Italy) or in anything else, for of a certainty the game is up: on this account make your peace with God, since of remedies there is none." That is what might be called the delicate and finished touch, in the way of breaking bad news, and even the historian's sentiments were outraged, since he remarks: "he had raised these men, suddenly and without grounds, to a condition to which they were not fitted; therefore they did not hesitate to say to such a ruler things that were out of their province, also failing to observe the reverent and humble attitude suited to the case." When this little joint speech had been delivered "each one said a few brief words," to which this impenitent optimist replied: "I have hopes that God will help me, since peradventure *I am not as ill as you suppose!*" Not long subsequently the king expired,—as so commonly happens with people who have particularly apprehended their latter end,—peacefully, without suffering, fitted with the necessary sacraments, and conversing with those about him concerning the arrangements that he wished carried out at his funeral!

Louis XI has led me to such lengths that I shall have to make short work of the other medical details in our author. Charles VIII, his successor, struck his head against a beam in a doorway, and succumbed in nine hours, probably to meningeal hemorrhage. This occurred on the eve of "pasques fleuries," the pretty term for palm Sunday. The account was given to Commynes by the King's confessor who during the preceding week had on two occasions had the King at confession one of them on account of those who came to him for scrofula—as was likewise mentioned in connection with Louis. Commynes goes on to say that the disorder was apoplexy and that the physicians hoped that it would only affect one arm and not carry off the patient. "He was attended by four good physicians but only trusted the craziest of the lot, to whom he accorded so much authority that the others did not dare to speak, although they would gladly have purged him four days previously, as they thought they detected indications of death,—which actually came true." These must have been very far-sighted practitioners indeed.

Another interesting passage in Commynes is that in which he tells of the neurasthenic condition into which fell Charles, the iron duke of Burgundy, after his terrible rout at the hands of the Swiss at the battle of Morat,—and of the treatment of this disorder. He says: "he worked little, and kept to himself, and seemed to do so more from obstinacy than from any other cause, for his grief was so great as to upset his mind, so that he became seriously ill. For whereas his natural temperament and bodily heat were so great that he could not stand wine, but in the morning usually took some "ptizanne" and eat rose-conserve to freshen himself up, this grief changed his disposition in such a way that he had to be put on strong wine undiluted; and in order to get the blood back to the heart, they placed burning tow in dry-cups, and applied them thus heated to the cardiac region." This treatment of such a common trouble as neurasthenia may appeal to some inquiring mind.

In this connection (and also on another occasion) Commynes speaks of the advisability in cases of great adversity of acquiring relief by unburdening the soul to others: "It is of the greatest service to confer with special friends, and not to be afraid to manifest one's distress . . . since this relieves the heart and cheers it up and one's spirits revive." The other instance refers to Louis XI in his illness: "on no occasion did he complain, as do all kinds of persons in trouble, at any rate that is the sort of man *I* am, and I have seen many others act in a similar manner, since to lament is said to relieve suffering.' This is, of course, a well-known fact of current observation.

A visit to the donjon prisons of Loches, where Louis used to keep his particular enemies in safe guardiance, raises some curious medical points. One of the very original features of this institution was that the royal gaoler, not satisfied with shutting his prisoners up in dungeons cut out of the solid rock, in some cases altogether without light, had had constructed solid cages, 8 feet by 8 by 7, out of rectangular bars of oak strengthened by iron inside and out, into which he would pass a victim and then have the cage swung up in the air to a beam. Cardinal de la Balue, for instance, is reported to have spent three years of his long captivity in such a cage; and even Philippe de Commynes relates that under Louis' successor he personally was shut up in one for eight months.

Still other prisoners, besides those kept in ordinary dungeon chambers with no light and air but what could penetrate through one of the slits in the 4-5 metres thick wall, in the cages, and in caves with no light whatever,—were confined by an oak grating in the window-aperture itself; their space, then, would be in the form of a wedge, whose point was the outside window slit, its sides the thickness of the wall, and its base the opening into the dungeon barred by the oak grating. Thus, one very distinguished captive, the Duc d'Alençon, is reported to have passed five years in such a predicament at Loches.

Now the interesting question is this. Those prisoners were mortals like ourselves. They were mentally fulgurated, besides being inadequately clothed and fed. They had no light, little air, and no heat; in particular, the situation of the prisoners in those window-cells must have been trying to the extreme. Yet they seem to have survived it,—in fact Philippe refers to his little experience in terms that are almost jocose. Speaking of the inventor of these cages he says: "Many are those who have cursed him, among them myself, who have 'sampled' one of them for eight months, under the present king." It would appear that the men of those times must have been made of very different stuff from ourselves.

There is one piquant detail, in connection with these dungeons and torture-chambers, that can hardly be omitted. Louis XI was very devout; a man who could act with such ferocity as that was pretty sure to be pious,—*that* could have been told in advance. Under the church up in the fortifications of Loches is a subterranean chapel where he was accustomed to perform his devotions, and in particular he was in the habit of praying there for the souls of the prisoners he was about to submit to torture! From this chapel runs an underground passage that ends,—in the dungeon where de la Balue hung in his bird-cage,

and d'Alençon was enclosed in his icy window-aperture! The King could thus pay them a little private visit, now and then, and gather their personal views as to things in general! These rulers were not styled protectors of the true faith without very just grounds, evidently.

"S."

ITALIAN QUINTUPLETS.

BOSTON, MAY 18, 1914.

Mr. Editor: The newspaper clipping attached hereto gives the information that Rosa Corrada gave birth to five children at one parturition and that all are enjoying the best of health.

Inasmuch as we seldom hear of quintuplets being born, I thought it might be well to report this apparently authentic case.

Yours truly,

GAETANO PRAINO, M.D.

CINQUE FIGLI IN UNA VOLTA.

Palermo, 15.

Un fatto che si assicura non ha alcun riscontro s'è prodotto in questa città. Certa Corrado Rosa, metteva alla luce in un sol parto cinque figliuoli.

Puerpera e neonata godono ottima salute.

SOCIETY NOTICES.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The American Medical Editors' Association will meet on June 22 at the Marlborough-Blenheim Hotel, Atlantic City, N. J., under the presidency of Dr. E. A. VanderVeer of Albany, N. Y.

MASSACHUSETTS MEDICO-LEGAL SOCIETY.—The annual meeting will be held in Room 125 of the Copley-Plaza Hotel, Boston, on Tuesday, June 9, 1914, at two o'clock.

Preceding the meeting, the annual lunch will be served in Room 123 at 1.30 o'clock.

Annual reports and election of officers.

The following papers will be read and discussed:—

1. "The Relation of the Industrial Accident Board to the Medical Examiner," Mr. Edward F. McSweeney, Member of the Massachusetts Industrial Accident Board.
2. "Poisoning by Paris Green," Theodore S. Bacon, M.D., Associate Medical Examiner, of Springfield.
3. "The Murder of Captain Charles D. Wyman of the Barge *Glendower*," George Burgess Magrath, M.D., Medical Examiner, of Boston.

OLIVER H. HOWE, M.D.,
Recording Secretary.

Cohasset, May 20, 1914.

APPOINTMENTS.

SYRACUSE UNIVERSITY.—*Dr. Oliver W. H. Mitchell* has been appointed assistant professor of bacteriology.

UNIVERSITY OF MISSOURI.—*Dr. E. R. Clark* has been appointed professor of anatomy, and *Dr. Mazyck P. Ravenel* professor of preventive medicine.

RECENT DEATHS.

DR. CHARLES T. WAINRIGHT, of New York, died from cardiac disease at Englewood, N. J., on May 7. He was a native of Lewis County, Mo., and 56 years of age. Dr. Wainright was graduated from the Missouri Medical College in 1882, and afterwards studied for a considerable time in Europe. In 1889 he received the degree of M.D. from Bellevue Hospital Medical College, New York, also. He was appointed professor of internal medicine at the University Medical College, Kansas City, Mo., and after serving for several years resigned to accept a similar position at the New York Post-Graduate Medical School. For some time before his death he had been incapacitated by ill health.

DR. WILLIAM EDMUND WEBER, of New York, died suddenly on May 7, at the age of 47. He was graduated from the College of Physicians and Surgeons, New York, in 1891, and since 1896 had served in the New York City Health Department. For the past four years he had had charge of the work of the infants' milk stations of the department. Dr. Weber was also attending physician to the out-patient department of the German Hospital.

DR. JOHN ALEXANDER FITZ-HUGH, a Fellow of The Massachusetts Medical Society, died at Amesbury, March 21, 1914, aged 59 years.

DR. THOMAS M. L. CHRYSTIE, of New York, died on May 19, at his country home at Rye, Westchester County. Dr. Chrystie was a lineal descendant of Major James Chrystie of the New York troops in the Continental Army, and was a hereditary member of the Society of the Cincinnati. He was born in 1841 at New Windsor, on the Hudson, where the family had been early settlers. He was graduated from Trinity College, Hartford, in 1863, and served for a time at the Cavalry Corps Hospital of the Army of the Potomac. He was then transferred to the navy, and was acting ensign on the staff of Admiral Farragut until the close of the war. He was graduated from Bellevue Hospital Medical College in 1867, and later became attending surgeon to the New York Orthopedic Dispensary and Hospital. For the past twenty-five years he had been surgeon of the New York State Branch of the Society of the Cincinnati.

DR. DANIEL MORRIS WOOLLEY, of Brooklyn, died from cancer of the liver on May 18. He was a native of Deal Beach, N. J., 64 years of age, and was graduated from the Medical Department of New York University in 1885.

DR. JOSEPH E. A. LANOUETTE, who died of septicemia on May 16, in Manchester, N. H., was born at Champlain, Que., in 1850. He graduated in 1872 from University Bishop College. From 1873 to 1881 he served as a surgeon in the Canadian militia. He was for many years a member of the local board of health.

BOOKS AND PAMPHLETS RECEIVED.

Public Health Reports. Vol. XXVIII, No. 42, October 17, 1913. Containing Information of the Current Prevalence of Disease, the Occurrence of Epidemics, Sanitary Legislation and Related Subjects.

London Public Health Administration, a Summary. By W. McC. Wanklyn. Longmans, Green and Company, London, 1913.

Modern Medicine. By Sir William Osler, M.D., and Thomas McCrae, M.D. Vol. I. Lea and Febiger, 1913.

Surgical Treatment. By Sir W. Watson Cheyne and F. F. Burghard. Lea and Febiger, 1913.

Portraits of Dr. William Harvey. Oxford University Press. London, 1913.

Exophthalmic Goiter Cured by Ligating One Superior Thyroid Artery. By Leigh F. Watson, M.D. Reprint.

Abolishing Pain after Operations with Nerve Block a Distance. By Leigh Watson, M.D. Reprint.